

20020716.qrp v02_n618.qrl.20020716

Date: Tue, 16 Jul 2002 19:03:10 EDT
From: qrp-l@Lehigh.EDU
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Subject: QRP-L digest 2618

QRP-L Digest 2618

Topics covered in this issue include:

- 1) [129823] Re: AAPB - smt practice kit II?
by Steven Weber <kd1jv@moose.ncia.net>
- 2) [129824] help please
by Bruce Rattray <rattray@gpfn.sk.ca>
- 3) [129825] Re: help please
by "Kevin M., KC8SFJ" <adverseyaw@twmi.rr.com>
- 4) [129826] Re: Is direct conversion fm a contradiction in terms?
by Fran Flynn <fflynn@adelphia.net>
- 5) [129827] QRP Excellence
by DYARNES@aol.com
- 6) [129828] Ham shops in the Fort Worth area
by "Kevin M., KC8SFJ" <adverseyaw@twmi.rr.com>
- 7) [129829] Re: QRP Excellence
by K5BDZ@aol.com
- 8) [129830] Battery Charging Question
by "GARY McCAUGHEY" <mail4gary@worldnet.att.net>
- 9) [129831] Re: Battery Charging Question
by "Mike Yetsko" <myetsko@insydesw.com>
- 10) [129832] Re: QRP Excellence
by "Joe Everhart" <n2cx@voicenet.com>
- 11) [129833] Re: QRP Excellence
by DYARNES@aol.com
- 12) [129834] For Sale
by Donn Kuse <casey.jay@gte.net>
- 13) [129835] Field Day - W4T
by "Delbert Long" <ad6we@hotmail.com>
- 14) [129836] Re: Battery Charging Question
by "Karl F. Larsen" <k5di@zianet.com>
- 15) [129837] Re: Is direct conversion fm a contradiction in terms?
by David Hinerman <WD8CIV@worldnet.att.net>
- 16) [129838] Re: Battery Charging Question
by Paul Womble <pwomble1@tampabay.rr.com>
- 17) [129839] Radial Lengths (long, was dipping traps)
by "James R. Duffey" <jamesd1@flash.net>
- 18) [129840] Re: Ham shops in the Fort Worth area
by Lew Paceley <lew@paceley.com>
- 19) [129841] Re: Ham shops in the Fort Worth area

- by Paul Womble <pwomble1@tampabay.rr.com>
- 20) [129842] Re: Need Portable "Atomic" Clock
by "James R. Duffey" <jamesd1@flash.net>
- 21) [129843] Re: help please
by Bruce Rattray <rattray@gpfn.sk.ca>
- 22) [129844] FS: TenTec Century 21 w/External Calibrator
by "Mark Andrews (KE4IOF)" <KE4IOF@ke4iof.com>
- 23) [129845] FS: MFJ-1118 DC Outlet Strip
by Ron Majewski <ron.majewski@veridian.com>
- 24) [129846] Re: another schematic capture question
by "Trevor Jacobs" <kg6cyn@earthlink.net>
- 25) [129847] FS Earphone
by k5gq@juno.com
- 26) [129848] 60 meter CW/SSB QRP frequencies?
by Wayne Burdick <n6kr@elecraft.com>
- 27) [129849] Re: Modulation modes
by "Ian Wilson" <ianmwilson@earthlink.net>
- 28) [129850] Re: Modulation modes
by "Gordon Cougar" <gcouger@provalue.net>
- 29) [129851] Re: Battery Charging Question
by "Leon Heller" <leon_heller@hotmail.com>
- 30) [129852] Subject: carrying case for . . .
by John R Kirby <n3aaz-qrp@juno.com>
- 31) [129853] Re: [FS Earphone] - I have about 50
by k5gq@juno.com
- 32) [129854] Re: Field Day - W4T
by "Michael C. Boatright" <ko4wx@mindspring.com>
- 33) [129855] Re: Modulation modes
by "Karl F. Larsen" <k5di@zianet.com>
- 34) [129856] RE: "Dipping" traps
by Bill Coleman <aa4lr@arrl.net>
- 35) [129857] Re: another schematic capture question
by David Hinerman <WD8CIV@worldnet.att.net>
- 36) [129858] invisible wire
by David Hinerman <WD8CIV@worldnet.att.net>
- 37) [129859] [FS] HW8 and HWA-7-1 PS
by Chuck Carpenter <w5usj@9plus.net>
- 38) [129860] Re: invisible wire
by Tom Feeny <tfeeny@comcast.net>
- 39) [129861] Re: invisible wire
by David Hinerman <WD8CIV@worldnet.att.net>
- 40) [129862] Atomic alarm Clock
by "ss lyon" <sslyon@megalink.net>
- 41) [129863] Birdies in 17 meter TX
by Bill Meara <n2cqr@clix.pt>
- 42) [129864] Re: Rocky Mountain Rock-mite EARLY SPY PHOTOS!!!
by "Rod NØRC" <rod@n0rc.us>
- 43) [129865] FS Classic OHR-400

by William K Penhallegon <w4stx@juno.com>
44) [129866] FS Antenna
by "wd7y@pyramid.net" <wd7y@pyramid.net>
45) [129867] RE: "Dipping" traps
by Bill Coleman <aa4lr@arrl.net>
46) [129868] Wanted: RIT kit for SW-xx+ series
by Fred Bonavita <k5qlf@yahoo.com>
47) [129869] A fun QRPp QSO on 40m
by "Bert Herald" <wf7i@hotmail.com>
48) [129870] Major Shack Clearance Sale- Updated
by aluscre <aluscre@neo.rr.com>
49) [129871] Re: A fun QRPp QSO on 40m
by "Steve/n0tu" <n0tu@codenet.net>
50) [129872] NEQRP CW Net, Thursday, 17 July 02, 8:30 PM EDT, 3.565 MHz
by cludinsky@attbi.com
51) [129873] Mixed Signals [On the Light Side]
by "Ron McConnell" <rcmcc@earthlink.net>
52) [129874] NA5N Solar Report and
by "Mark S. Adams, P.E." <msadams@acsu.buffalo.edu>
53) [129875] Zack Lau DC tribander and Ugly Weekender
by "Juanjo Pastor" <ec5aca@wanadoo.es>
54) [129876] Dipole loading
by "Upton, Shawn" <SUpton@allegromicro.com>
55) [129877] Re: Dipole loading
by "George, W5YR" <w5yr@att.net>
56) [129878] Re: Dipole loading
by David Hinerman <WD8CIV@worldnet.att.net>
57) [129879] KIT: the 'Rock-mite'
by "Dave Benson" <nn1g@earthlink.net>
58) [129880] Charging a 150amp/hr battttery
by "Joe W2KJ" <w2kj@earthlink.net>
59) [129881] HB: LM317 voltages
by "w8diz" <w8diz@fpqrp.com>
60) [129882] Re: Dipole loading
by "dan wanchic" <wa8vzq@cloudnet.com>
61) [129883] Re: Charging a 150amp/hr battttery
by "Ingo Meyer, DK3RED" <dk3red@t-online.de>
62) [129884] RE: Charging a 150amp/hr battttery
by "Tracy Markham" <tracy@bytemark.com>
63) [129885] Re: Dipole loading
by Gary Slagel <gdslagel@yahoo.com>
64) [129886] Re: Charging a 150amp/hr battttery
by David Hinerman <WD8CIV@worldnet.att.net>
65) [129887] Re: Charging a 150amp/hr battttery
by Chuck Adams <k7qo@earthlink.net>
66) [129888] Re: Dipole Loading
by "Steve Lawrence" <Steve.Lawrence@itwfeg.com>
67) [129889] RE: Modulation modes

- by "Hare,Ed, W1RFI" <w1rfi@arrl.org>
- 68) [129890] MFJ493 Keyer Mods
by "Coleman Callaway" <coleman@callaways.org>
- 69) [129891] stacked toroids
by David Hinerman <WD8CIV@worldnet.att.net>
- 70) [129892] Rock-Mite Mod #1
by Chuck Adams <k7qo@earthlink.net>
- 71) [129893] RE: stacked toroids
by "Tracy Markham" <tracy@bytemark.com>
- 72) [129894] Short Dipole w/Dave Benson's Noise Generator
by "ss lyon" <sslyon@megalink.net>
- 73) [129895] Re: Rock-Mite Mod #1
by "w8diz" <w8diz@fpqrp.com>
- 74) [129896] Re: Rock-Mite Mod #1
by "Bill Jones" <kd7s@psnw.com>
- 75) [129897] Re: stacked toroids
by Chuck Carpenter <w5usj@9plus.net>
- 76) [129898] FS: DSW-20
by "Paul Christensen" <w9ac@arrl.net>
- 77) [129899] Re: Short Dipole w/Dave Benson's Noise Generator
by "Karl F. Larsen" <k5di@zianet.com>
- 78) [129900] 2N5564 good at RF?
by "Brad Hernlem" <alihernlem@hotmail.com>
- 79) [129901] Re: Short Dipole w/Dave Benson's Noise Generator
by "George, W5YR" <w5yr@att.net>
- 80) [129902] Re: Radial Lengths (long, was dipping traps)
by Bill Coleman <aa4lr@arrl.net>
- 81) [129903] LED orange film free for postage
by "Hudson, Steve (RBI-US CMD)" <sdhudson@reedbusiness.com>
- 82) [129904] RE: Charging a 150amp/hr batttery
by Conrad Weiss <radman@best.com>
- 83) [129905] Noise Bridge... oooops!
by "ss lyon" <sslyon@megalink.net>

Date: Mon, 15 Jul 2002 19:12:47 -0400
From: Steven Weber <kd1jv@moose.ncia.net>
To: qrp-l@lehigh.edu
Subject: [129823] Re: AAPB - smt practice kit II?
Message-ID: <3.0.6.32.20020715191247.007a31e0@mailhost.ncia.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

> <http://www.qsl.net/kd1jv/aapb.HTM>

>

Rats, of course that link doesn't work :-(

Try <http://www.qsl.net/kd1jv/appb.HTM>

Apparently I didn't name the file the way I thought I did.. hate when that happens! Sorry about that, it will most likely happen again..

72,
Steve, KD1JV
"Melt Solder"
White Mountains of New Hampshire
<http://www.qsl.net/kd1jv/>

Date: Mon, 15 Jul 2002 17:10:33 -0600 (CST)
From: Bruce Rattray <rattray@gpfn.sk.ca>
To: Low Power Group <qrp-l@lehigh.edu>
Subject: [129824] help please
Message-ID: <Pine.LNX.4.33.0207151708400.3139-1000000@neale.gpfn.sk.ca>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

I need to find the command to postpone for a few days while I at the Glacier/Waterton hamfest in Montana,....I thought I had a page of commands from a saved QRP-L message but this page doesn't exist now...

..72/73 - Bruce (VE5RC+VE5QRP) QRP-C#1 QRP-L#886 ARCI#9683 Zombie#272
A-1 Operator Club - 10/10# 944 - QRP Borg#1 - Whiner#10 -
- VE5QRP SOC#11 - VE5RC SOC#12 - oo#148 - K2#2032 - COG#15 -
"QRP! How sweet it is!" "I am da man wit "DAH" paddle!"

Date: Mon, 15 Jul 2002 19:34:55 -0400
From: "Kevin M., KC8SFJ" <adverseyaw@twmi.rr.com>
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [129825] Re: help please
Message-ID: <001c01c22c58\$3a67f1b0\$0d701d41@magnus>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Bruce,
Use this link to the page with the commands.

<http://qrp.lehigh.edu/lists/qrp-l/join.html>

Kevin, KC8SFJ

----- Original Message -----

From: "Bruce Rattray" <rattray@gpfn.sk.ca>

To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>

Sent: Monday, July 15, 2002 7:10 PM

Subject: help please

>

> I need to find the command to postpone for a few days while I at
> the Glacier/Waterton hamfest in Montana,....I thought I had a page of
> commands from a saved QRP-L message but this page doesn't exist now...

>

> ..72/73 - Bruce (VE5RC+VE5QRP) QRP-C#1 QRP-L#886 ARCI#9683

Zombie#272

> A-1 Operator Club - 10/10# 944 - QRP Borg#1 - Whiner#10 -

> - VE5QRP SOC#11 - VE5RC SOC#12 - oo#148 - K2#2032 -

COG#15 -

> "QRP! How sweet it is!" "I am da man wit "DAH"

paddle!"

>

>

>

Date: Mon, 15 Jul 2002 19:43:15 -0400

From: Fran Flynn <fflynn@adelphia.net>

To: qrp-l@lehigh.edu

Subject: [129826] Re: Is direct conversion fm a contradiction in terms?

Message-ID: <3D335E13.5B7C4F82@adelphia.net>

MIME-Version: 1.0

Content-Type: text/plain; charset=us-ascii

Content-Transfer-Encoding: 7bit

I remember an old VTR, a 2" Quadruplex video recorder, the RCA TR-4,
it had a loop of coax in the demod module just for demodulating
video from the FM off tape. The coax loop was of course a
delay line. So it seems that analog methods could be used
also. The carrier was 10 Mhz with about 1 Mhz of deviation.

The direct and delayed signal was fed to a simple phase
comparator, I think it was a couple of diodes.

Or, there is slope detection where you use an AM detector
after a tuned circuit, as the carrier frequency changes

so does the RF amplitude. It's not the most linear type of FM detector but you can recover a signal that way.

>From: lenny wintfeld <w2bvh@comcast.net>
>Reply-To: w2bvh@comcast.net
>To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
>Subject: Is direct conversion fm a contradiction in terms?
>Date: Sun, 14 Jul 2002 20:20:09 -0400
>
>Is it possible to detect fm at baseband? Is it practical?

""Yes. You demodulate the baseband signal by sampling it and multiplying each sample by a delayed copy of itself and low-pass filter the result. You need to use a DSP for this, of course. I keep meaning to try this for myself.
""

73, Leon

Date: Mon, 15 Jul 2002 20:15:27 EDT
From: DYARNES@aol.com
To: qrp-l@lehigh.edu
Subject: [129827] QRP Excellence
Message-ID: <84.2b4fa89d.2a64bf9f@aol.com>
MIME-Version: 1.0
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit

Hello All,

I meant to do this a week or so ago, when I actually received my last issue, but better late than never. I just wanted to offer my sincere congratulations and express my appreciation publicly to George Heron (and all his phantom helpers whoever they may be) for the continued excellence of "Homebrew". I really don't mean to minimize the others involved. I just don't know for sure who they are. For example, I'm pretty sure Joe Everhart has a lot to do with various projects, articles, etc., and he is a very prolific contributor to all sorts of QRP activities, but this publication is really George's baby for the most part. Anyway, George has put out issue #8 for his eighth straight home run! Those of you who don't subscribe--tooooooooooooo bad for you!!!!!!!!!!!!!! You won't spend 15 bucks on a better deal.

I know from past conversations with George that he puts in lots of hours on stuff like this. I just want him to know that I appreciate it (even though

his "bride" probably doesn't appreciate it very much!), and I hope some of the rest of you will tell him if you enjoy it as much as I do. Of course, subscriptions and renewals go a long way to expressing your approval!

72 de Dave W7AQK

Date: Mon, 15 Jul 2002 20:47:15 -0400
From: "Kevin M., KC8SFJ" <adverseyaw@twmi.rr.com>
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [129828] Ham shops in the Fort Worth area
Message-ID: <000701c22c62\$549d5750\$0d701d41@magnus>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

gang,
It looks like I will be in Ft. Worth for a couple of days (or I might leave the same day, I don't know). Does anyone know of a good shop for Ham equipment or just general electronics in the area?

73,
Kevin, KC8SFJ
QRP-L #2366 - member since October/2001
QRP-ARCI #11248 - member since May/2002
HR - member since September/1965
--

AdverseYaw@twmi.rr.com <-- My email address
AdverseYaw@bigfoot.com <-- My forwarding address
Quote of the day--

Fashion is a form of ugliness so intolerable that we have to alter it every six months. - Oscar Wilde

Date: Mon, 15 Jul 2002 20:48:02 EDT
From: K5BDZ@aol.com
To: DYARNES@aol.com, qrp-l@lehigh.edu
Subject: [129829] Re: QRP Excellence
Message-ID: <116.14389e51.2a64c742@aol.com>
MIME-Version: 1.0
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit

In a message dated 07/15/2002 7:21:25 PM Central Daylight Time,
DYARNES@aol.com writes:

> George Heron (and all
> his phantom helpers whoever they may be) for the continued excellence of
> "Homebrew".

OK...I'll bite... what's the e-mail address to contact for subscriptions,
etc. This is a new one on me...

Bill K5BDZ

Date: Mon, 15 Jul 2002 20:50:13 -0400
From: "GARY McCAUGHEY" <mail4gary@worldnet.att.net>
To: <qrp-1@lehigh.edu>
Subject: [129830] Battery Charging Question
Message-ID: <004d01c22c62\$c29113a0\$62ddfea9@main>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="Windows-1252"
Content-Transfer-Encoding: 7bit

Hello All,

I know this subject is old, but humor me, I have a short
memory span. Can you charge a NiMh HT battery pack in a
quick charger that was made for NiCad batteries?

Thanks
Gary
W2UX

Please respond to w2ux@att.net

Date: Mon, 15 Jul 2002 21:08:04 -0400
From: "Mike Yetsko" <myetsko@insydesw.com>
To: <mail4gary@worldnet.att.net>,
 "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>
Subject: [129831] Re: Battery Charging Question
Message-ID: <001201c22c65\$3ec4d040\$0300a8c0@charter.net>
MIME-Version: 1.0

Content-Type: text/plain;
charset="Windows-1252"
Content-Transfer-Encoding: 7bit

> I know this subject is old, but humor me, I have a short
> memory span. Can you charge a NiMh HT battery pack in a
> quick charger that was made for NiCad batteries?
>

Sure!!

You can also hook it to your car battery.

However, the degree of success you will have will vary.

Seriously, NiMH takes a different algorithm to charge effectively. And if you don't follow it, you can overheat and damage the battery.

Best is NOT to try to charge NiMH in NiCad chargers... Yes, it will work, but it can be hard on the batteries (ie shorten their service life) and it may not charge the batteries fully, depending on the algorithm used in the charger if it's a 'smart charger;.

Can you just 'trickle charge' NiMH? As in an 'el cheapo' NiCad charger? That might have better success than the 'high tech' NiCad only charger!

Bottom line? I wouldn't do it, unless it was an emergency and having power in the batteries for a the time you'd cover is more important than their service life, or even possible damage to your charger or equipment.

Mike

Date: Mon, 15 Jul 2002 21:38:54 -0400
From: "Joe Everhart" <n2cx@voicenet.com>
To: "qrp1" <qrp-1@lehigh.edu>
Cc: <K5BDZ@aol.com>
Subject: [129832] Re: QRP Excellence
Message-ID: <001501c22c69\$8c710300\$383947d1@n2cxtoy>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Bill and others...

Complete subscription info for the QRP Homebrewer is available on the NJQRP web page at: http://www.njqrp.org/data/qrp_homebrewer.html

It is published by George, N2APB as the NJQRP premier journal. George can normally be reached at n2apb@amsat.org though he is currently out of contact.

I think it's a great journal, too, though I *am* a tad biased!

For the NJQRP
Joe E., N2CX

Date: Mon, 15 Jul 2002 21:46:54 EDT
From: DYARNES@aol.com
To: DYARNES@aol.com, qrp-1@lehigh.edu
Subject: [129833] Re: QRP Excellence
Message-ID: <19f.5443f9a.2a64d50e@aol.com>
MIME-Version: 1.0
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit

In my enthusiasm I erred slightly--the name of the publication is actually "QRP Homebrewer". I've just been referring to it around here as "Homebrew"--guess that's what I have on my mind. If you are interested in subscribing, contact George Heron directly at n2apb@amsat.org. I'm pretty sure he can take paypal subscriptions--how much easier can it get????

Dave W7AQK

Date: Mon, 15 Jul 2002 22:07:54 -0400
From: Donn Kuse <casey.jay@gte.net>
To: elecrafft@mailman.qth.net,
Low Power Amateur Radio Discussion <qrp-1@lehigh.edu>
Subject: [129834] For Sale
Message-ID: <3D337FFA.943133AD@gte.net>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Cleaning shack have the following for sale:

1. K1 (20/40M), extra KFL1-2 (20/15M), KNB1, KAT1, KBT1 all manuals and more. \$410.00
2. SW 40++ with Rit, FreqMite, LED power on with front panel switch, Bourne 10 turn tuning pot, in SW case, Power output 6+ w 13.8v. All manuals. \$125.00
3. Astron Heavy Duty Power Supply, RS12A, 13 v DC 9 amp. Manual. \$65.00
4. Radio Shack 22-805 Digital Multimeter, 24 range with PC Interface. Brand new. \$40.00
5. ARRL RFI Book. \$15.00
6. ARRL Antenna Book, 19th Edition with CD ROM. \$25.00
7. TennaTest VHF RF Noise Bridge with manual, cables, connectors. \$50.00
8. Radio Shack 64-2184 20/40 watt dual soldering station. \$15.00
9. Micronta Power/Modulation/SWR Meter, 0-500 watts, Manual. \$15.00.

All above includes shipping CONUS. Shipping insurance included on QRP rigs.

Please email me direct. Tnx
72/73 Donn, WB4ZWT

Date: Mon, 15 Jul 2002 19:13:41 -0700
From: "Delbert Long" <ad6we@hotmail.com>
To: qrp-l@lehigh.edu
Subject: [129835] Field Day - W4T
Message-ID: <F163MzwS2HGhIOBggG2000118d5@hotmail.com>
Mime-Version: 1.0
Content-Type: text/html

```
<html><div style='background-color:'><DIV></DIV>
<DIV></DIV>
<P><BR>One of my contacts on Field Day was W4T...obviously a Special Event
Station...anyone know how to get a QSL?</P>
<P>Thanks...<BR><BR>Delbert Long, AD6WE </P>
<DIV></DIV>
<DIV></DIV>Everything should be made as simple as possible, but not simpler. -
Albert Einstein
<DIV></DIV></div><br clear=all><hr>Send and receive Hotmail on your mobile device:
<a href='http://g.msn.com/1HM1ENUS/c152??PI=44364'>Click Here</a><br></html>
```

Date: Mon, 15 Jul 2002 20:25:20 -0600 (MDT)

From: "Karl F. Larsen" <k5di@zianet.com>
To: GARY McCAUGHEY <mail4gary@worldnet.att.net>
Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>
Subject: [129836] Re: Battery Charging Question
Message-ID: <Pine.LNX.4.44.0207152021400.4047-100000@Daisy.dog>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

You should charge NOTHING! in a quick charger unless you enjoy buying lots of new batteries. My charger is a slow one from WW Electric that takes 12 hours to charge my 7.2 volt NiMh 1500 mah batteries. I'm still using one I bought 2 years ago and it's loosing capacity slowly but still takes a good charge!

On Mon, 15 Jul 2002, GARY McCAUGHEY wrote:

> Hello All,
>
> I know this subject is old, but humor me, I have a short
> memory span. Can you charge a NiMh HT battery pack in a
> quick charger that was made for NiCad batteries?
>
> Thanks
> Gary
> W2UX
>
> Please respond to w2ux@att.net
>
>
>

--
Yours Truly,

- Karl F. Larsen, (505) 524-3303 -

Date: Mon, 15 Jul 2002 21:49:42 -0400
From: David Hinerman <WD8CIV@worldnet.att.net>
To: qrp-l@lehigh.edu
Subject: [129837] Re: Is direct conversion fm a contradiction in terms?
Message-ID: <5.1.0.14.1.20020715214650.00b388c0@postoffice.worldnet.att.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

At 07:43 PM 7/15/2002 -0400, you wrote:

>I remember an old VTR, a 2" Quadruplex video recorder, the RCA TR-4,
>it had a loop of coax in the demod module just for demodulating
>video from the FM off tape. The coax loop was of course a
>delay line. So it seems that analog methods could be used
>also. The carrier was 10 Mhz with about 1 Mhz of deviation.
>
>The direct and delayed signal was fed to a simple phase
>comparator, I think it was a couple of diodes.

That's pretty much how the omnipresent quadrature detector works - a signal and a delayed version of it (courtesy of a little coil and cap in an IF can, tuned to give the 90-degree shift at the IF) are fed into a mixer and audio comes out the other end.

Dave

"You can fool some of the people all of the time. That's enough to make a living." - Lance Burton

Dave Hinerman
WD8CIV@att.net

Date: Mon, 15 Jul 2002 22:30:43 -0400
From: Paul Womble <pwomble1@tampabay.rr.com>
To: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>
Subject: [129838] Re: Battery Charging Question
Message-ID: <3D338553.35ACC22F@tampabay.rr.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

I have had nothing but good success with rapid chargers.

I use one now to charge NiMH AAA's for my HT and Digital Camera.

A different charger in my truck charges NiCd batteries for an 800 MHz trunked portable.

No problems with batteries here.

Paul K4FB

"Karl F. Larsen" wrote:

> You should charge NOTHING! in a quick charger unless you enjoy buying
> lots of new batteries.

Date: Mon, 15 Jul 2002 20:42:58 -0600
From: "James R. Duffey" <jamesd1@flash.net>
To: Bill Coleman <aa4lr@arrl.net>,
Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>
Subject: [129839] Radial Lengths (long, was dipping traps)
Message-ID: <B958E452.19214%jamesd1@flash.net>
Mime-version: 1.0
Content-type: text/plain; charset="US-ASCII"
Content-transfer-encoding: 7bit

Bill - I want to thank you for taking the time to reply to my posting,

Let me explain my "sort of nonsense", as you put it, recommendations for radials.

My methodology is the same as yours, but I have used slightly different parameters.

The numbers I calculated were for a radial end separation of 0.02 wavelengths. If you put 0.02 into your sample calculations for 0.25 wavelength radials, you will get my numbers. And my recommendation for 0.25 wavelength radials, 78 is only slightly larger than the 64 you propose for a spacing of 0.25 wavelengths.

So the point of the disagreement is what is the spacing to use? Or more specifically, why did I use 0.02 wavelengths?

As you stated, there is an optimum radial spacing. Wider spacings waste induced ground currents and leave performance remaining on the ground as it were. Smaller spacings do not collect more current below a threshold, and so wire is wasted. The best spacing depends on the ground conductivity and frequency among other parameters.

For years, I read posts by Tom, W8JI, on the Top Band Reflector about this limit and his recommended radial separation of 0.01 to 0.05 wavelengths. While this made sense to me, I had never seen anybody discuss it in detail or derive it from what is known of induced ground currents. In the July 2000 QST Severn wrote an excellent article on ground currents under verticals which summarized the pioneering work of Brown at RCA in the mid

30s. The article is highly recommended reading. Spreadsheets are available with the equations from this article on the ARRL web site.

I modified one of the equations to calculate the amount of relative current collected with a given radial spacing at the circumference. There is an error in the equations given by Severn, a correction was printed later. The spreadsheet equations are correct on the League's web site. I calculated

$$\text{Relcurrent} = 1 / \sqrt{1 + ((36000 * \sigma * (\pi^4) * (\delta)^2 / f) * (\log(30000 * (\delta / 2) / f * (0.1)) - 0.5)^2))}$$

where σ is the soil conductivity, δ is the separation of the radials at the ends and f is the frequency of operation. I used MathPad to do these calculations. I will be happy to provide you with a copy of the simple program.

Here are the results of that calculation. The δ column is the radial spacing. The remaining three columns are the relative current for the ground conductivity at the head of the column. The units are Siemens/meter, a unit of conductivity. The 0.001 S/m is poor soil, the 0.005 S/m is average soil, and the 0.04 S/m is for excellent conductivity. Severn used these numbers in his article and I wanted to be able to compare results. Selected points did agree with those Severn calculated, so I am fairly confident that these are pretty good. These numbers were calculated for 1.8 MHz.

δ	0.001 S/m	0.005 S/m	0.04 S/m
0.001	0.99	0.99	0.99
0.002	0.99	0.99	0.99
0.005	0.99	0.99	0.99
0.01	0.99	0.99	0.90
0.02	0.99	0.97	0.42
0.05	0.93	0.46	0.065
0.1	0.51	0.12	0.015
0.2	0.13	0.03	0.003
0.5	0.02	0.004	0.0004

One can cut and paste this into a spreadsheet to plot it. The graphs are quite convincing.

Now one can decide what value of δ to use depending on the soil conductivity. If we set an arbitrary amount of collected current of say 90%, then we see that the δ is slightly higher than 0.05 for poor soil, about 0.03 or so for average soil, and about 0.01 for good soil. I was encouraged that this was the same range that Tom had suggested. Note that these are fairly sharp functions, going from 99% to a few percent over a spacing of a factor of 20 or so.

Now some caution should be used in interpretation of these results. The relative current collected that I have calculated is solely a function of the radial spacing at the ends. The number of radials and length are left to float. In some cases, particularly with the very wide and very short spacings, the results may be unphysical and don't have much meaning. But in the region of interest, it is realistic. The error is obvious when one plots the data with a fine grid, but the error is less than 10 % or so.

I chose a delta value of 0.02 to be conservative. Most of the current induced in the ground is close to the antenna, and I felt that it is best err on the side that one gets as much of this as one can, even if one spends a bit more on wire cost. Also, since most hams do not know their ground conductivity and it can vary over seasons; again at the risk of leaving some uncollected current I have estimated conservatively. In addition, many of the verticals used by hams are short (less than a quarter wave), and the importance of ground is more significant for these as the radiation resistance is lower and ground losses are a bigger fraction of the total losses. Thus, it is important to insure that one collects as much of the current close in to the vertical as possible.

I have no serious argument with your spacings of 0.05 and 0.025 and they are fine as well. Mine is an engineering solution, and fairly wide variations (say 20% to 30%) in radial length and numbers are probably not going to be noticed readily, particularly in the middle of my chart. I don't think that one should go any longer or shorter than the last and first lines of the chart. But wire is fairly cheap and one can purchase 500 ft of it at a builder's supply house for less than \$20, so it is not expensive to be conservative.

Let me address some of your other points.

The amount to be gained in going to radials longer than a quarter wave length is quantifiable. Any Antenna Handbook published in the last 20 years has a table of "Optimum" radial configurations. In checking this, one finds that in going from 90 0.25 wavelength radials to 120 0.4 wavelength radials one gains a half dB. So there is about 0.5 dB out there to get by going past a quarter wavelength. Now whether or not this is worth it is up to the person purchasing the wire. One should certainly have most of the other antenna system losses, including feed line, well below this before buying the wire. On the other hand, taken a few at a time, laying radials can be therapeutic, not unlike Winston Churchill and his brick wall.

I too was bothered initially by the recommendations of many short radials at the low end that my calculations suggest. It seems counter intuitive. But the Antenna Book recommends 16 0.1 wavelength radials as the minimum "optimum" configuration and this is not too different from my minimum configuration. I am not too worried by the short configuration, in practice

this is more often than not defined by the real estate available. One should decide where the vertical should go, determine the maximum radius to the farthest obstacle, check in the chart, and put in that number of radials, no matter how long. Again this is a conservative approach.

By the way I now realize that one can calculate the relative merit of the short radials by doing a numerical integration of the current density over the length of the radials. I will do this when I get some time. My back of the envelope calculation tells me that my short radial configuration will collect about 40% more current than the 4 quarter wave length radials you suggest. Neither perform very well. I made conservative assumptions that I believe favor the quarter wave length radials. However, I am not quoting this as :fact", only that it supports my initial calculation. I will let you know when I have done the full calculation if you are interested.

While my suggestions may seem "impossibly short" to you, consider the lengths on 160 Meters (or even 80 Meters) and the size of the average back yard. Or even the length of radials supported by a townhouse "backyard" that is 10 feet square.

One needs more radials when the soil is good, not fewer. This is counter intuitive, but is discussed by Severn. W8JI has also made this point. One can think of it this way, with a good ground higher currents are induced in the ground than in the poorer ground. One needs more radials to collect these higher currents.

I apologize for the long post, but I felt compelled to give some sense, by way of technical detail, to what you have labeled "nonsense". - Dr.

Megacycle Kk6MC/5

--

James R. Duffey KK6MC/5

Cedar Crest, NM DM65

Date: Mon, 15 Jul 2002 21:52:36 -0500
From: Lew Paceley <lew@paceley.com>
To: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>
Cc: adverseyaw@twmi.rr.com, lew@paceley.com
Subject: [129840] Re: Ham shops in the Fort Worth area
Message-ID: <000d01c22c73\$d7c70200\$6501a8c0@swbell.net>
MIME-version: 1.0
Content-type: text/plain; charset=Windows-1252
Content-transfer-encoding: 7BIT

Hi Kevin,

There's probably a lot of shops in DFW that I haven't been to but here's a few in the Dallas metro area:

Texas Towers: New/used equipment, aluminum tubing, books, antennas, etc. Not too much on display but they have a really big selection of new equipment at good prices. They even carry aluminum tubing for antennas in 3' sections that you can take back on the plane with you.
<http://www.texastowers.com/info.htm>

Tanners: "surplus" components, tools, and equipment extraordinaire. I can spend hours in this place. If you like to homebrew bring your stocking list and allocate lots of time. Tanners is just off of I35E, north of the I635/I35E intersection by two or three exits.
<http://www.tannerelectronics.com/Directions.htm>

Fry's Electronics: everything electronic from components to computers to software to telescopes to big screen TVs to ? They carry Alinco gear but generally it's pricey compared to online. They have a decent selection of component parts and they usually discount ARRL publications some. Their prices and selection of computer related stuff is excellent. The Fry's in Arlington, TX off I-20 is closest to Ft. Worth.
<http://www.frys.com/>

And finally, if you're in the DFW area this Saturday (July 20), you would be more than welcome to attend the NETXQRP club meeting in Terrell (near Dallas) @ 1PM. Directions are here:
<http://www.netxqrp.org>

Have fun!

72/73,
Lew
N5ZE

Date: Mon, 15 Jul 2002 23:00:47 -0400
From: Paul Womble <pwomble1@tampabay.rr.com>
To: Low Power Amateur Radio Discussion <qrp-1@lehigh.edu>
Subject: [129841] Re: Ham shops in the Fort Worth area
Message-ID: <3D338C5F.FD17394C@tampabay.rr.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Tanners and Fry's should be on any visiting ham's DFW list of things to do.

If you are into electronics and gadgets plan to spend lots of time at Fry's. There is lots to see.

I also recommend hooking up with the Pesky Texans. They are a great bunch of guys :-)

Paul K4FB

Date: Mon, 15 Jul 2002 20:59:43 -0600
From: "James R. Duffey" <jamesd1@flash.net>
To: <qrp-1@lehigh.edu>
Subject: [129842] Re: Need Portable "Atomic" Clock
Message-ID: <B958E83F.1921B%jamesd1@flash.net>
Mime-version: 1.0
Content-type: text/plain; charset="US-ASCII"
Content-transfer-encoding: 7bit

I bought a Timex digital travel alarm at Target for \$9.95. I keep it in my portable operations bag. It will do 24 hour time and is easy to set. It has large digits. It also has a calender for displaying UTC date. For portable you don't need the precision (and extra cost) that the WWVB set clocks provide. At most you will be off a second or so at the end of the day. Just remember to change the battery every year or so, or before every FYBO. - Dr. Megacycle KK6MC/5

--
James R. Duffey KK6MC/5
Cedar Crest, NM DM65

Date: Mon, 15 Jul 2002 21:06:04 -0600 (CST)
From: Bruce Rattray <rattray@gpfn.sk.ca>
To: "Kevin M., KC8SFJ" <adverseyaw@twmi.rr.com>
Cc: Low Power Amateur Radio Discussion <qrp-1@lehigh.edu>
Subject: [129843] Re: help please
Message-ID: <Pine.LNX.4.33.0207152105560.19205-100000@neale.gpfn.sk.ca>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Thank you Kevin...

..72/73 - Bruce (VE5RC+VE5QRP) QRP-C#1 QRP-L#886 ARCI#9683 Zombie#272
A-1 Operator Club - 10/10# 944 - QRP Borg#1 - Whiner#10 -
- VE5QRP SOC#11 - VE5RC SOC#12 - oo#148 - K2#2032 - COG#15 -
"QRP! How sweet it is!" "I am da man wit "DAH" paddle!"

Date: Mon, 15 Jul 2002 22:09:48 -0500 (Central Daylight Time)
From: "Mark Andrews (KE4IOF)" <KE4IOF@ke4iof.com>
To: "QRP-L" <qrp-l@lehigh.edu>
Subject: [129844] FS: TenTec Century 21 w/External Calibrator
Message-ID: <3D338E7C.000006.01156@carrera>
MIME-Version: 1.0
Content-Type: Text/Plain
Content-Transfer-Encoding: quoted-printable

I have a TenTec Century 21 w/External Calibrator. I bought this radio from someone on the list about 4 years ago; it has been on the air very little, but worked well the last time I used it. Includes original manual. This radio is a 9+ on a scale of 10.

The first \$175.00 via Paypal takes it. Buyer to pay actual shipping and handling.

Please reply directly to me, not the list: KE4IOF@KE4IOF.com.

Thanks,

Mark

Mark A. Andrews, KE4IOF

Date: Mon, 15 Jul 2002 23:44:12 -0400
From: Ron Majewski <ron.majewski@veridian.com>
To: "qrp-l@lehigh.edu" <qrp-l@lehigh.edu>
Subject: [129845] FS: MFJ-1118 DC Outlet Strip
Message-ID: <3D33968C.3BB87E0B@veridian.com>
MIME-version: 1.0
Content-type: text/plain; charset=us-ascii
Content-transfer-encoding: 7bit

Hello All,

For Sale: MFJ-1118 High Current DC Outlet Strip
Good condition, fully functional
1 scratch on the face
1 big ding on each side where the power screwdriver
rubbed against the case during installation
Includes instruction sheet and original box
\$42 including CONUS shipping
Terms: money order up front
Contact: Ron (W8RU) at w8ru@arrl.net

Thanks and 73!

Date: Mon, 15 Jul 2002 21:27:54 -0700
From: "Trevor Jacobs" <kg6cyn@earthlink.net>
To: "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>,
<kd1jv@moose.ncia.net>
Subject: [129846] Re: another schematic capture question
Message-ID: <001901c22c81\$2a3adfe0\$179bb2d1@tjacobs>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

----- Original Message -----

From: Steven Weber <kd1jv@moose.ncia.net>
To: Low Power Amateur Radio Discussion <qrp-1@Lehigh.EDU>
Sent: Monday, July 15, 2002 7:38 AM
Subject: Re: another schematic capture question

>

> I know Trev likes Egale, but I found that program clumsy and hard to
use
> (in fact drove me 'friggin nuts) as compared to Circad. (Circad is a
free
> down load too)
>

Hehehe...well Steve, I guess nothing is flows as well as some of the old
DOS PCB software, but I did find Eagle a lot easier to use than OrCad
and Pads2000 (I use this in the office). It's makes sense once you get
used to it, just like anything else. I haven't played with Circad, is
that Windows based or DOS based?

73's Trev KG6CYN

Date: Tue, 16 Jul 2002 00:05:46 -0500
From: k5gq@juno.com
To: qrp-1@lehigh.edu
Subject: [129847] FS Earphone
Message-ID: <20020716.000551.-121871257.14.k5gq@juno.com@juno.com>
MIME-Version: 1.0
Content-Type: text/plain
Content-Transfer-Encoding: 7bit

The two links below show the earphone.

The length of the cable is approximately five feet.
(The one I measured was 2 inches short of five feet.)

I use the earphone for HF mobile.
Texas does not allow both ears to be covered.

<http://home.swbell.net/k5gq/earphone/onear.jpg>

<http://home.swbell.net/k5gq/earphone/earphone.jpg>

Shipped by mail in the US for \$4.00
Personal check or money order.

K5GQ
Mark Tyler
5814 Havenwoods Dr.
Houston, TX 77066

Date: Mon, 15 Jul 2002 22:58:40 -0700
From: Wayne Burdick <n6kr@elecraft.com>
To: "Sandy, W5TVW" <ebjr@i-55.com>
Cc: Elecraft <elecraft@mailman.qth.net>, qrp <qrp-1@lehigh.edu>
Subject: [129848] 60 meter CW/SSB QRP frequencies?
Message-ID: <3D33B60F.DD35F5E@elecraft.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Hi Sandy,

We haven't tested 60 meters in the K1 yet, but there's a good chance this will work.

Like you, we're waiting to see where the preferred CW/QRP band segment ends up, since this will determine the premix crystal needed for the K1's filter board. Since the proposed band is 5.250-5.450 MHz, it seems that 5.250-5.300 could become the most active CW subband. In this case 5.290 might be a good choice for the CW QRP frequency, and 5390 for SSB. No doubt other frequencies have been proposed, too.

73,
Wayne
N6KR

"Sandy, W5TVW" wrote:

>
> Will be looking for an addition to my K1 as well when the ARRL or whoever
> decides on where CW will be! (Lower 50 khz?)
> An 80/60 meter 2 band board would be a nice addition to the 4 band K1!!
>
> 73,
> Sandy W5TVW
> K1 #1178

Date: Mon, 15 Jul 2002 23:29:03 -0700
From: "Ian Wilson" <ianmwilson@earthlink.net>
To: "Gordon Couger" <gordon@couger.com>,
 "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>
Subject: [129849] Re: Modulation modes
Message-ID: <000a01c22c92\$17d6ddc0\$0b02a8c0@trabucoserver>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

> :
> Were the listeners used to listening to SSB? There is a definite learning
> curve in understanding SSB speech.
>

No, I'd say the listeners were equally inexperienced in either mode.

--ian

Date: Tue, 16 Jul 2002 01:54:33 -0500
From: "Gordon Couger" <gcouger@provalue.net>
To: "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>
Subject: [129850] Re: Modulation modes
Message-ID: <069101c22c95\$a46c5eb0\$ab2dccd0@home>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

----- Original Message -----

From: "Ian Wilson" <ianmwilson@earthlink.net>
To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
Sent: Monday, July 15, 2002 11:15 AM
Subject: Re: Modulation modes

: I've done some experiments with 2m and 6m mobile rigs to see whether SSB
has
: an advantage over FM
: under those conditions.
:
: The only variable was the modulation type; antenna, location of vehicle,
: peak power, etc, remained constant.
:
: The results failed to demonstrate any significant advantage of SSB over
FM,
: either for readability or for
: range.
:
: Since this was surprising (and disappointing), I started thinking about
what
: might be happening.
: NBFM uses about 17.5kHz of bandwidth. SSB uses about 2.5kHz. So there
: should be a power gain
: of 7:1, or 8dB, from the relative bandwidths. To offset this, we are not
: producing anything like the possible
: max PEP on sideband, both because we are not using any pre-emphasis, and
: because we don't drive the
: audio stages very hard (i.e. we don't usually yell into the microphone).
I
: would estimate the total of these
: two effects as something like 5:1, or 7dB.

:

Were the listeners used to listening to SSB? There is a definite learning curve in understanding SSB speech.

73
Gordon W5RED

Date: Tue, 16 Jul 2002 08:15:32 +0000
From: "Leon Heller" <leon_heller@hotmail.com>
To: mail4gary@worldnet.att.net, qrp-1@lehigh.edu
Subject: [129851] Re: Battery Charging Question
Message-ID: <F11jHc1TmoFq9iILxsd00015cc2@hotmail.com>
Mime-Version: 1.0
Content-Type: text/plain; format=flowed

>From: "GARY McCAUGHEY" <mail4gary@worldnet.att.net>
>Reply-To: mail4gary@worldnet.att.net
>To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
>Subject: Battery Charging Question
>Date: Mon, 15 Jul 2002 20:50:13 -0400
>
>Hello All,
>
>I know this subject is old, but humor me, I have a short
>memory span. Can you charge a NiMh HT battery pack in a
>quick charger that was made for NiCad batteries?
>

It's not a good idea. Slow charging is OK, but a rapid charger won't be able to detect when the battery is charged and it will get overcharged. I tried it once with a NiCd pack in which I'd replaced the cells by NiMH ones, to see what happens, and the battery got very hot. It probably shortened the life of the cells.

73, Leon

--

Leon Heller, G1HSM Tel: +44 1327 359058 Email:leon_heller@hotmail.com
My web page: http://www.geocities.com/leon_heller
My low-cost Altera Flex design kit: <http://www.leonheller.com>

Chat with friends online, try MSN Messenger: <http://messenger.msn.com>

Date: Tue, 16 Jul 2002 05:39:45 -0400
From: John R Kirby <n3aaz-qrp@juno.com>
To: gsailsbury@mobill1.net, qrp-1@lehigh.edu
Subject: [129852] Subject: carrying case for . . .
Message-ID: <20020716.054726.-283477.0.n3aaz-qrp@juno.com>
MIME-Version: 1.0
Content-Type: text/plain
Content-Transfer-Encoding: 7bit

From: "Gene Sailsbury" <gsailsbury@mobill1.net>
>To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>
>Date: Mon, 15 Jul 2002 14:57:18 -0500
>Subject: carrying case for 259B
>
>Does anyone know of a carrying case for the 259B other
>then the one they now sell?
>

www.mountain-ops.com
sales@mountain-ops.com
503-982-5786
Hubbard, OR
they advertise in WORLD RADIO
with cases for the 706, 817, K1, K2 and other stuff.

John
N3AAZ
FM 19 xa

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<http://dl.www.juno.com/get/web/>.

Date: Tue, 16 Jul 2002 05:24:27 -0500
From: k5gq@juno.com
To: mgoins@usa.net
Cc: qrp-1@lehigh.edu

Subject: [129853] Re: [FS Earphone] - I have about 50
Message-ID: <20020716.053216.-49415437.1.k5gq@juno.com@juno.com>
MIME-Version: 1.0
Content-Type: text/plain
Content-Transfer-Encoding: 7bit

I believe I have enough for those who needs a spare or two.

Additional ones, shipped to same US address \$ 3.00

On Tue, 16 Jul 2002 00:44:58 -0500 <mgoins@usa.net> writes:

> and what if I want 2, or 3?
>
>
> k5gq@juno.com wrote:
> The two links below show the earphone.
>
> The length of the cable is approximately five feet.
> (The one I measured was 2 inches short of five feet.)
>
> I use the earphone for HF mobile.
> Texas does not allow both ears to be covered.
>
>
> <http://home.swbell.net/k5gq/earphone/onear.jpg>
>
>
> <http://home.swbell.net/k5gq/earphone/earphone.jpg>
>
>
> Shipped by mail in the US for \$4.00
> Personal check or money order.
>
> K5GQ
> Mark Tyler
> 5814 Havenwoods Dr.
> Houston, TX 77066
>
>
>

Date: Tue, 16 Jul 2002 07:33:01 -0400
From: "Michael C. Boatright" <ko4wx@mindspring.com>

To: qrp-1@lehigh.edu
Cc: ad6we@hotmail.com, w4tl@arrl.net
Subject: [129854] Re: Field Day - W4T
Message-ID: <5.0.2.1.2.20020716073015.02383180@pop.mindspring.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

Contact Terry Jones, W4TL, and he will point you in the right direction. W4T was operated by the Lanierland Amateur Radio Club/W4CBA GA Baptists Disaster Relief Team.

72 de Mike, K04WX
GA Section Emergency Coordinator

>>One of my contacts on Field Day was W4T...obviously a Special Event Station...anyone know how to get a QSL?
Michael C. Boatright

Date: Tue, 16 Jul 2002 05:47:25 -0600 (MDT)
From: "Karl F. Larsen" <k5di@zianet.com>
To: Ian Wilson <ianmwilson@earthlink.net>
Cc: Low Power Amateur Radio Discussion <qrp-1@lehigh.edu>
Subject: [129855] Re: Modulation modes
Message-ID: <Pine.LNX.4.44.0207160542560.1623-1000000@Daisy.dog>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Hi Ian, what you experianced is what the earlier test proved. NBFM has an edge on weak signal work. Not expected but a fact and as you suggest it can be due to greater bandwidth.

On Mon, 15 Jul 2002, Ian Wilson wrote:

> I've done some experiments with 2m and 6m mobile rigs to see whether SSB has
> an advantage over FM
> under those conditions.
>
> The only variable was the modulation type; antenna, location of vehicle,
> peak power, etc, remained constant.
>
> The results failed to demonstrate any significant advantage of SSB over FM,
> either for readability or for
> range.
>

--

Yours Truly,

- Karl F. Larsen, (505) 524-3303 -

Date: Tue, 16 Jul 2002 08:16:32 -0400
From: Bill Coleman <aa4lr@arrl.net>
To: <tracy@bytemark.com>, "QRP-L" <qrp-l@lehigh.edu>
Subject: [129856] RE: "Dipping" traps
Message-ID: <20020716121631.NZHA19221.imf18bis.bellsouth.net@[192.168.0.20]>
Mime-Version: 1.0
Content-Type: text/plain; charset="US-ASCII"

On 7/15/02 1:05 PM, Tracy Markham at tracy@bytemark.com wrote:

>HMMM ...

>

>I was able to successfully 'pull' my signal toward where I wanted to talk by
>moving several very long radials toward where I wanted to work that day.

>

>(back when I had a lot ...) I had a vertical up for 20m that had maybe 20 or
>so radials, most of 'em 1/4 wave. But I had a hard time working into Europe,
>so I put in three full wave radials pointing toward Europe.

While this works - you're really shaping the pattern by deciding where
you are distributing the loss.

Part of the reason your system benefited was you may not have had quite
enough radials. As you add radials, the current in each radial
diminishes, and so the effect of moving a radial also diminishes.

Think of it this way. If you have a solid conductive sheet, and a
vertical that sources a 1 amp current into the sheet (working against a
vertical), the current is evenly distributed into the sheet. As you
double the distance, the circumference quadruples, so the current in the
sheet is likewise diminished to 1/4.

This inverse square model holds even for a few radials on lossy ground.

So, in your example above, you might have been better off to use the same
length of wire to put in more 1/4 radials all around (12 more radials
would have given you a total of 32), and would have reduced your losses
in all directions, not just toward Europe.

Further, if you have enough real estate, you'd get a lot more directivity by putting in either phased or parasitic vertical elements than by adding long radials.

>It worked fairly well. I had experience with Cellular Phones in that the
>majority of radiation would 'follow' the path of the most metal in the car.
>Now, at 850 MHz that car body is wayyyy more than a wavelength, right?

Certainly.

I'm not saying that longer radials won't "work", I'm saying that radials longer than a 1/4 wave have so little effect that they aren't worth the effort to put into the ground.

>SO, in a nutshell there are reasons to have longer radials. For me it was
>footprint and 'path' finding.

>

>AM radio stations have to deal with that a lot, too. They are given an area
>to cover and have to manipulate their pattern to cover the area without
>covering into an adjacent area. Most of the time they do it with arrays of
>verticals, but frequently they are creative with the ground radials as well.

I believe this has more to do with overcoming local variations in ground conductivity than wanting to shape the pattern.

Note that AM radio stations use a common design that requires 120 1/2 wave radials. This is definitely overkill for 1/4 wave verticals. (Although some AM radio stations use longer verticals)

Also note that AM radio signals have different effects on the ground than do amateur HF signals. Much like the skin effect, currents in the ground penetrate more deeply at lower frequencies.

Bill Coleman, AA4LR, PP-ASEL Mail: aa4lr@arrl.net

Quote: "Not within a thousand years will man ever fly!"

-- Wilbur Wright, 1901

Date: Tue, 16 Jul 2002 08:34:39 -0400

From: David Hinerman <WD8CIV@worldnet.att.net>

To: qrp-1@lehigh.edu

Subject: [129857] Re: another schematic capture question

Message-ID: <5.1.0.14.1.20020716083231.00a70450@ipostoffice.worldnet.att.net>

Mime-Version: 1.0

Content-Type: text/plain; charset="us-ascii"; format=flowed

At 09:27 PM 7/15/2002 -0700, you wrote:

>used to it, just like anything else. I haven't played with Circad, is
>that Windows based or DOS based?

Trev,

"Yes." (I always wanted to do that.) There's both a DOS version and a Windows version. Sadly, their files do not interchange. I'd love to get my sticky little fingers on some of Steve's designs. I'm just too lazy to re-enter his schematics.

Dave

"You can fool some of the people all of the time. That's enough to make a living." - Lance Burton

Dave Hinerman
WD8CIV@worldnet.att.net

Date: Tue, 16 Jul 2002 08:47:18 -0400
From: David Hinerman <WD8CIV@worldnet.att.net>
To: qrp-l@lehigh.edu
Subject: [129858] invisible wire
Message-ID: <5.1.0.14.1.20020716083648.00a51e50@ipostoffice.worldnet.att.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

Folks,

After starting and reading the thread on invisible wire, what should unexpectedly appear in my mailbox but a package with two rolls of gray wire. Nice stuff, too - feels like Teflon insulation, looks like about 22 gauge, 19 strand.

To the gentleman who sent it unbidden - thank you. You're a fine example of the spirit of community in ham radio.

Now to get this stuff up in a tree...

Dave

"You can fool some of the people all of the time. That's enough to make a living." - Lance Burton

Dave Hinerman
WD8CIV@worldnet.att.net

Date: Tue, 16 Jul 2002 08:08:08 -0500
From: Chuck Carpenter <w5usj@9plus.net>
To: qrp-l@lehigh.edu, QRPP-I@yahooglegroups.com
Subject: [129859] [FS] HW8 and HWA-7-1 PS
Message-ID: <3.0.2.32.20020716080808.006b42c8@mail.9plus.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Folks,

Works, in good shape, with manuals. Needs some alignment and such to improve operation. Some dings in the front panel paint.

Price is \$100 shipped any USPS address.

Reply direct if interested.

Email Alt: w5usj@arrl.net, w5usj@go.com

Chuck Carpenter, W5USJ, Point, Rains Co., TX - EM22cv, NETXQRP #1
QRP-ARCI #5422, QRP-L #1306, QRPP-I #115, ARS #1280, SOC #57
Zombie #759, COG #11, 6 Club #201, NETXQRP <http://www.netxqrp.org>

Date: Tue, 16 Jul 2002 09:13:48 -0400
From: Tom Feeny <tfeeny@comcast.net>
To: *QRP-L <qrp-l@lehigh.edu>
Subject: [129860] Re: invisible wire
Message-ID: <001201c22cca\$eec50360\$3a5c2044@waldlk01.mi.comcast.net>
MIME-version: 1.0
Content-type: text/plain; charset=iso-8859-1
Content-transfer-encoding: 7BIT

Tell the rest of us what it is (brand, part nr., etc.).

Tom

> After starting and reading the thread on invisible wire, what should
> unexpectedly appear in my mailbox but a package with two rolls of gray
> wire. Nice stuff, too - feels like Teflon insulation, looks like about 22
> gauge, 19 strand.

Date: Tue, 16 Jul 2002 09:35:25 -0400
From: David Hinerman <WD8CIV@worldnet.att.net>
To: qrp-l@lehigh.edu
Subject: [129861] Re: invisible wire
Message-ID: <5.1.0.14.1.20020716093051.00a75280@ipostoffice.worldnet.att.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

At 09:13 AM 7/16/2002 -0400, you wrote:

> Tell the rest of us what it is (brand, part nr., etc.).
> Tom
>
> > After starting and reading the thread on invisible wire, what should
> > unexpectedly appear in my mailbox but a package with two rolls of gray
> > wire. Nice stuff, too - feels like Teflon insulation, looks like about 22
> > gauge, 19 strand.

Tom,

It's not marked, and it's just in hand-rolled coils, not on a spool. Belden Wire and Cable makes similar stuff, and may have even made this.

Dave

"You can fool some of the people all of the time. That's enough to make a living." - Lance Burton

Dave Hinerman
WD8CIV@worldnet.att.net

Date: Tue, 16 Jul 2002 21:36:53 -0400
From: "ss lyon" <sslyon@megalink.net>
To: "chat qrp" <qrp-1@lehigh.edu>
Subject: [129862] Atomic alarm Clock
Message-ID: <007b01c22d32\$6e56eb40\$aac7e742@megalink.net>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Someone posted re Lifestyle.com as a source for a \$19.95 clock and I ordered it -got it and am happy. check out their site and look up:

SKU	Item	Today's Price	Qty	Total
LC738	Digital Travel Alarm Clock	\$19.95	73	
AA1MY				

Seabury & Sharon Lyon
99 Sparrowhawk Mtn Rd
Bethel ME, 04217 U.S.A.
207-836-2576

Virus Protection by Norton and ZoneAlarm

Date: Tue, 16 Jul 2002 13:48:45 -0100
From: Bill Meara <n2cqr@clix.pt>
To: qrp-1@lehigh.edu
Subject: [129863] Birdies in 17 meter TX
Message-ID: <1.5.4.32.20020716144845.006f6a80@pop.clix.pt>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

For those unfamiliar with my problem, here's the background:

Carrier oscillator at 5.173 to balanced modulator to Crystal filter to NE602 mixer. VX0 hetrodyne oscillator (Colpitts, with rock, coil and cap in series).

For the VX0 I have two fundamental crystals from the same manufacturer. One at 23.323 Mhz, the other at 23.303 Mhz. My plan was to use the first for around 18.130 - 18.150 and the other for the lower portion of the 17 meter phone band.

Both rocks work fine in the VX0 circuit. I can pull the 23.323 rock about 23 Khz, and the 23.303 rock pulls about 15 khz. Both sound clean when I

listen at the 23 mhz freqs. So I don't think the problem is in the VX0.

But when I put the 23.303 rock in the circuit and listen at 18 Mhz, all kinds of spurs and birdies pop up around the operating frequency. They are very close to the op frequency. When I set the RX to a freq in the operating range, and then turn the tuning cap on the TX, instead of the one nice clean signal ("whoop") that I hope to hear, I get multiple signals ("whoop, whoop, whoop"). I can't even tell which one is the strongest. At several points I can hear simultaneous oscillations at freqs within a few hundred cycles.

My latest theory is that the second harmonic of the 18 Mhz output frequency is interacting with the sixth harmonic of the carrier oscillator and is generating a second signal in the 5.174 Mhz range. I think this may be what is producing the multiple (whoop, whoop, whoop) peaks.

I notice that the output from the carrier oscillator is quite strong. And the harmonics are strong. It is simple Pierce oscillator circuit, crystal controlled.

How should I go about getting rid of the possibly offending harmonics? Should I play around with the amount of voltage that the amp is running on? Should I reduce the amount of feedback in the circuit? Will I have to resort to shielding and filtering?

Thanks in advance. 73 Bill

73 de Bill CU2JL N2CQR
Sao Miguel Island, Azores, Portugal
900 miles West of Lisbon 37.7N 25.67W
<http://planeta.clix.pt/n2cqr>

Date: Tue, 16 Jul 2002 08:13:45 -0600
From: "Rod N0RC" <rod@n0rc.us>
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [129864] Re: Rocky Mountain Rock-mite EARLY SPY PHOTOS!!!
Message-ID: <020701c22cd2\$ff7c84a0\$6501a8c0@greyrock>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Folks,

I spiffed the page a bit. The biggest thing is smaller graphics for those with slower connections. (You can click the image for a larger

view if you want). I also reorganized some of the info, and added little more detail where appropriate.

73, Rod N0RC

----- Original Message -----

From: "Rod N0RC" <rod@n0rc.us>

To: "Low Power Amateur Radio Discussion" <qrp-1@Lehigh.EDU>

Sent: Monday, July 15, 2002 8:17 AM

Subject: Rocky Mountain Rock-mite EARLY SPY PHOTOS!!!

> Folks,

>

> Here at N0RC labs (actually a messy basement) we got access to a
> Rock-mite from Small Wonder Labs. Don't ask how and I won't have to
> lie! ;-) It's a trade secret.

>

> In a matter of hours the rig was built and mounted in the QRP
standard

> enclosure, and Altoid mint tin. Actually it was part of the test.

> Rumors have been flying around about the rig's size, power and

> frequency range. A hasty web page was assembled to document the

> salient facts:

>

> <http://www.frii.com/~rwc/r-m/>

>

Date: Tue, 16 Jul 2002 10:30:42 -0400

From: William K Penhallegon <w4stx@juno.com>

To: qrp-1@lehigh.edu

Subject: [129865] FS Classic OHR-400

Message-ID: <20020716.103144.-706591.1.w4stx@juno.com>

MIME-Version: 1.0

Content-Type: text/plain; charset=us-ascii

Content-Transfer-Encoding: 7bit

Four bands, 80, 40, 30 & 20

Superhet receiver with diode ring mixer & RF preamp

4 pole crystal ladder IF filter

Front panel selectable 4 pole audio filter
Switchable AGC circuit with manual RF gain control
RIT with + or - 1 KHz range
0 to 5 watts output (13.6VDC)
QSK & Iambic keyer
Well constructed and factory alligned.
Very good condition
\$150 OBO includes CONUS shipping

Date: Tue, 16 Jul 2002 08:15:42 -0700
From: "wd7y@pyramid.net" <wd7y@pyramid.net>
To: QRP-L Members Talk <qrp-l@lehigh.edu>
Subject: [129866] FS Antenna
Message-ID: <B95986AE.8850%wd7y@pyramid.net>
Mime-version: 1.0
Content-type: text/plain; charset="US-ASCII"
Content-transfer-encoding: 7bit

Hy-Gain AV-620 6 Band Vertical Antenna
Bands 6,10, 12, 15, 17, and 20 meters.
Can work well with a tuner on 40 meters.
In good working condition.

3/8 wavelength O/A Length 25 Ft. A good roof mount vertical.
Radiation Angle at 1/4 Wavelength high 16 degrees.
No radials or traps. Power Handling 1500 Watts.
Wind survival 80 MPH. I use guys for extra support.
Low-Profile. Automatic Band switching.
Manual included.
Buyer to pay shipping.

Selling price \$270.00
Asking price \$100.00

Date: Tue, 16 Jul 2002 11:20:01 -0400
From: Bill Coleman <aa4lr@arrl.net>
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [129867] RE: "Dipping" traps
Message-ID: <20020716152132.QEES1190.imf00bis.bellsouth.net@[192.168.0.20]>
Mime-Version: 1.0
Content-Type: text/plain; charset="US-ASCII"

On 7/16/02 8:16 AM, Bill Coleman at aa4lr@arrl.net wrote:

>Part of the reason your system benefited was you may not have had quite
>enough radials. As you add radials, the current in each radial
>diminishes, and so the effect of moving a radial also diminishes.

>

>Think of it this way. If you have a solid conductive sheet, and a
>vertical that sources a 1 amp current into the sheet (working against a
>vertical), the current is evenly distributed into the sheet. As you
>double the distance, the circumference quadruples, so the current in the
>sheet is likewise diminished to 1/4.

>

>This inverse square model holds even for a few radials on lossy ground.

Oh great, this is what I get for trying to do math early in the morning.

Folks, the inverse square doesn't apply to the circumference of a circle. That relationship is fixed at 2π . It's just a simple inverse relationship.

However, the model of a solid conductive sheet does apply, and as the circle circumference increases, the applicable current decreases.

So, it makes sense to decrease the resistance in the inner part of the radial circle, which I think Dr. Mc was getting at. This would apply for radials being many wavelengths long.

However, once you get shorter than 1/4 wave, other factors begin to apply. Foremost is the fact that once radials are spaced within about 0.05 to 0.025 wavelength, they become virtually indistinguishable from a solid sheet.

Four radials have this relationship up to about 0.044 to 0.022 wavelength in length. Eight radials extend this to about 0.064 to 0.032 wavelength. So, within this radius, there's no reason to have MORE radials (unless the radials are carrying currents out a further distance).

Ground-mounted radials couple currents to the ground. Because of this, the losses in the ground show up as a series resistance. Adding more radials decreases the series resistance (loss) in the antenna. This is why we tend to see a lowering impedance (and a decreasing SWR bandwidth) as radials are added.

To get the most benefit out of a length of radial wire, it makes more sense to me to keep the radials at least 1/4 wave long, rather than shorter, and it makes more sense to add more radials (until we have 32-64) within the 1/4 wave circle than to add longer radials.

Practically speaking, one adds as many radials as one can. I have 7 60 foot radials under my tower, which I shunt feed for 80m. Adding the last 4 radials really brought signal levels up on that antenna, so now it surpasses my low doublet at 35 feet. I have a whole quadrant where it is impossible to add radials (the house is in the way). I don't know if I will add the next 6 radials or not, since putting the radials down took a lot of work. Perhaps this winter.

Bill Coleman, AA4LR, PP-ASEL Mail: aa4lr@arrl.net
Quote: "Not within a thousand years will man ever fly!"
 -- Wilbur Wright, 1901

Date: Tue, 16 Jul 2002 08:36:52 -0700 (PDT)
From: Fred Bonavita <k5qlf@yahoo.com>
To: qrp-l@lehigh.edu
Subject: [129868] Wanted: RIT kit for SW-xx+ series
Message-ID: <20020716153652.81970.qmail@web21405.mail.yahoo.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii

The SW-xx+ RIT kit has been found. My thanks to those who responded to my request. 73, Fred, K5QLF, San Antonio..

Do You Yahoo!?
Yahoo! Autos - Get free new car price quotes
<http://autos.yahoo.com>

Date: Tue, 16 Jul 2002 08:38:42 -0700
From: "Bert Herald" <wf7i@hotmail.com>
To: qrp-l@lehigh.edu
Subject: [129869] A fun QRPp QSO on 40m
Message-ID: <F141mooIZNBvWmczX2000122fe@hotmail.com>
Mime-Version: 1.0
Content-Type: text/plain; format=flowed

I just thought I'd share a fun QSO I had last night with you all on the list.

I heard a guy calling CQ on 40m at about 0600z and I answered his call. It was Carl, K5HK/MM QRPp. I had about a 419 copy on him at first, very hard to pull out. But by the end of the QSO, he had pulled up to an S9 on my

inverted vee dipole! He was running 500 mW using a Norcal SMK1 and was on a cargo ship out in the Pacific Ocean between the US and Hawaii!! His antenna was a vertical using the ship's mast as a support (best as I could copy from him), about 75 ft tall. Most of the QSO I had 100% copy. The quality of his CW tone was superb, no drift or noticable chirp. I didn't know you could do so much with 1/2 a watt!

He said that you'd be surprised how many 599 reports he gets. I'm sure that the saltwater groundplane helps a lot as well. But still, I've heard QRO guys with worse signal strengths than he had.

Any of the rest of you guys worked Carl?

72s and 73s,

Bert WF7I

Chat with friends online, try MSN Messenger: <http://messenger.msn.com>

Date: Tue, 16 Jul 2002 11:57:04 -0400
From: aluscre <aluscre@neo.rr.com>
To: Tentec@contesting.com, qrp-1@lehigh.edu, fpqrp-1@mpna.com,
GQRP@egroups.com, Kenwood@mailman.qth.net, hfpack@yahooogroups.com,
Subject: [129870] Major Shack Clearance Sale- Updated
Message-ID: <200207161556.g6GFuMU28567@clmboh1-smtp3.columbus.rr.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii; format=flowed
Content-Transfer-Encoding: 7bit

Updated List

Major Shack Clearance Sale ***(see notes below)

--New Items--

Tower- Heights Aluminum Freestanding 38' on ground good condition. Pick up only Akron, OH -- \$195

Beam- Batternut HB-5B "Butterfly Beam"-Light weight, covers 20,17,15 & 10 Meters mine also worked on 6 M. See URL for more

information <http://www.texastowers.com/hf5b.htm>. Used, assembled and on ground. Pick up only Akron, OH-- \$195

Vertical- Batternut HV-6-V - covers 80, 40, 30, 20,15 & 10 Meters - Used, in good condition, partially dissassembled (re-assemble in 10 minutes) -- Pick up only Akron, OH-- \$195

Bird 43 Wattmeter and one plug-in element, mint-- \$300

--Previously Listed Items--

Ten-Tec - Omni V.9- Near mint condition, 1.8Hz, 500Hz and 250Hz optional filters, 500Hz filter in "nar" position,
with N4PY V.9 chip installed (I will include original T-T chip), RS-232 mod. - \$895

Ten-Tec - Paragon 585 - Near mint condition - \$595

Ten-Tec - Power Supply 961 - Near mint condition - \$125

Ten-Tec - Delta 580 - works fine, cosmetically 8 out of 10 includes Shure hand mic - \$350

Ten-Tec - Argonaut 509- works fine, cosmetically 8 out of 10 - \$250

Ten-Tec - 6 Meter FM Transceiver Model 1260 - \$145

Ten-Tec - 80 Meter QRP CW Transceiver Model 1380 - \$85

Ten-Tec - 9-Band SW Receiver Model 1253 - \$50

**SOLD- Kenwood- TS-690-S 160 to 6 Meter Transceiver with internal antenna tuner - Mint \$695

**SOLD- Kenwood- TS-450-S 160 to 10 Meter Transceiver with internal antenna tuner - Works fine 8 out of 10 cosmetically \$495

Kenwood- Computer Interfacing cable for above by LCU-3 replaces FIF-232 - \$45

Kenwood- Mobile Mounting Bracket for above - \$35

**SOLD- Yaesu- FT-817 QRP Portable All Mode 160 to 6 plus 2 & 440- mint in box \$600

Yaesu- FT-100 100 watt Mobile All Mode 160 to 6 plus 2 & 440- mint in box \$850

Yaesu- Separation kit for FT-100 - \$35 (or \$20 with FT-100)

Yaesu- FT-230 Mobile 2 Meter FM \$95

Yaesu- FT-470 Dual Band HT - \$130

Yaesu- FT-33 220 HT - \$110

MFJ- QRP CW Transceiver Model 9015 - \$100

MFJ- QRP CW Transceiver Model 9020 - \$100

MFJ- QRP CW Transceiver Model 9040 - \$100

**SOLD- MFJ- Antenna Tuner - Model 969 Deluxe Versa Tuner II with roller inductor 160 to 6 Meters- New in the box \$139

MFJ- Keyer - Model 492 Memory Keyer - Mint in the box \$85

Heath- Twin Bander HW24- 2M/440 Mobile & mic - \$120

**SOLD- Radio Shack- HTX-100 10 Meter SSB/CW - works fine 7 out 10 with mobile bracket & mic \$90

Radio Shack- HTX-10 10 Meter SSB/FM - mobile mount & mic - mint in box- \$110

Alinco- FM 2 Meter Mobile Model 110 - \$120

**SOLD- Alinco- FM Dual Band 2 Meter/440 Mobile Model ALD-24-T - \$130
Alinco- FM 2 Meter Mobile Model 110 - \$120

KDK- FM 2 Meter Mobile Model FM-240 \$85

***All items are in good working condition.

Payment with money order or pay-pal

Shipping paid by buyer

Photos for many items at <http://www.qsl.net/k8zt/pics.html>

Prices on some items are negotiable, Discounted "Package Deals" considered.

Trades (or partial trades) will be considered on some items (no boat
anchors, tube equipment or test equipment)

e-mail me for more information

--

|-----|

Anthony A. Luscre

K8ZT

Stow, Ohio

|-----|

Visit My Website at

<http://www.qsl.net/k8zt>

|-----|

Date: Tue, 16 Jul 2002 09:56:33 -0600

From: "Steve/n0tu" <n0tu@codenet.net>

To: <wf7i@hotmail.com>,

"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>

Subject: [129871] Re: A fun QRPp QSO on 40m

Message-ID: <000501c22ce1\$5cf662f0\$b0561d82@agilent.com>

MIME-Version: 1.0

Content-Type: text/plain;

charset="Windows-1252"

Content-Transfer-Encoding: 7bit

You bet!!!

Worked Carl on 20/40m aboard his shack/mm several times. Alwalys a very FUN QSO!!! ...he's definitely getting max fun/bang for buck from his little modified SST and SMK rigs. Had a very long rag chew on forty last winter w/he and his SMK/mm a most memorable QSO. Ranks up there with several TT2 Qs I've had. It seems the simpler rig the more fun it is to snag a quality QSO. IMHO Steve/n0tu

----- Original Message -----

From: "Bert Herald" <wf7i@hotmail.com>

To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>

Sent: Tuesday, July 16, 2002 9:38 AM

Subject: A fun QRPP QSO on 40m

> I just thought I'd share a fun QSO I had last night with you all on the
> list.

>

> I heard a guy calling CQ on 40m at about 0600z and I answered his call.
It

> was Carl, K5HK/MM QRPP. I had about a 419 copy on him at first, very hard
> to pull out. But by the end of the QSO, he had pulled up to an S9 on my
> inverted vee dipole! He was running 500 mW using a Norcal SMK1 and was on
a

> cargo ship out in the Pacific Ocean between the US and Hawaii!! His
antenna

> was a vertical using the ship's mast as a support (best as I could copy
from

> him), about 75 ft tall. Most of the QSO I had 100% copy. The quality of
> his CW tone was superb, no drift or noticable chirp. I didn't know you
> could do so much with 1/2 a watt!

>

> He said that you'd be surprised how many 599 reports he gets. I'm sure
that

> the saltwater groundplane helps a lot as well. But still, I've heard QRO
> guys with worse signal strengths than he had.

>

> Any of the rest of you guys worked Carl?

>

> 72s and 73s,

>

> Bert WF7I

>

>

> -----
> Chat with friends online, try MSN Messenger: <http://messenger.msn.com>

>

>

Date: Tue, 16 Jul 2002 16:09:39 +0000

From: cludinsky@attbi.com

To: qrp-l@lehigh.edu

Subject: [129872] NEQRP CW Net, Thursday, 17 July 02, 8:30 PM EDT, 3.565 MHz
Message-ID: <20020716160940.HTAL6023.sccrmhc02.attbi.com@rwcrcwbc58>

The NEQRP CW net will meet again Thursday night, 17 July 02, at 8:30 PM EDT (00:30Z, 18 July) on 3.565 MHz. Net control op will be John, K1RC, operating from Dracut, MA.

Please stop by and say hello to John and everyone on the NEQRP net.

72 DE K1CL,
Chuck.

Date: Tue, 16 Jul 2002 12:11:15 -0400
From: "Ron McConnell" <rcmcc@earthlink.net>
To: "QRP-L" <qrp-l@lehigh.edu>, "NJQRP" <njqrp@njqrp.org>,
"HFPack" <hfpack@yahoo.com>, "Fred Kirch" <fsk@lucent.com>,
Subject: [129873] Mixed Signals [On the Light Side]
Message-ID: <000201c22ce3\$6b66e920\$50cea441@earthlink.net>
MIME-Version: 1.0
Content-Type: text/plain;
charset="us-ascii"
Content-Transfer-Encoding: 7bit

[On the Light Side...]

Mixed Naval Signals

The new ensign was standing his first night watch on the bridge of a destroyer.

Far out on the horizon, the USS New Jersey was conducting a night gunnery exercise.

The ensign, seeing the flashes of light from the battleship, ran excitedly up to the signal bridge and pointed out, mistakenly, that there were "Morse code" signals coming from the other ship.

Ensign: "What are they saying?!"
What are they saying?!"

Signalman: "BOOM!!! BOOM!!!"

=====

Cheers, 73,
Ron McC., w2io1

Date: Tue, 16 Jul 2002 12:17:41 -0400
From: "Mark S. Adams, P.E." <msadams@acsu.buffalo.edu>
To: na5n@zianet.com, qrp-1@lehigh.edu
Subject: [129874] NA5N Solar Report and
Message-ID: <324677943.1026821861@OES-MADAMS>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit
Content-Disposition: inline

Hi Paul and Gang,

Mark, K2Q0 from WNY here. Thanks for the super solar report! I would just add one thing to the report. Let's hope for a MASSIVE disturbance and FANTASTIC auroras along with a HUGE K-index. Then we can all break out the weak signal 50/144/222MHz gear and have some **INCREDIBLE FUN**.

Since taking up VHF/UHF QRP with my 817 and lots of HB beams and quads, I have been having so much fun that you cannot wipe the grin off my face! Add to this the 222 transverter I am about to build and I will need plastic surgery to correct the grin.

Check out www.w1ghz.org for the transverter.

See you all this weekend in the CQ VHF WW contest!!

Mark K2Q0
QRP doesn't stop at 28MHz!

Date: Tue, 16 Jul 2002 18:21:58 +0200
From: "Juanjo Pastor" <ec5aca@wanadoo.es>
To: "Low Power Amateur Radio Discussion" <qrp-1@lehigh.edu>
Subject: [129875] Zack Lau DC tribander and Ugly Weekender
Message-ID: <005001c22ce5\$150865c0\$ca33243e@fer>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: quoted-printable

Hello again,

Thanks for the great response I had on these two great projects, I have now all the information I was looking for. Wow, I even had Wes Hayward himself sending the Ugly Weekender article scanned to me!. Thanks a lot, Wes!. Will tell you how the CV15 transceiver project goes...

73, 72 de Juanjo, EA5CHQ-EC5ACA. EA-QRP #104, G-QRP #9742, QRP-L #1662.

Juanjo Pastor
C/San Roque, 4-1=BA
46460 Silla
SPAIN

e-mail: ea5chq@wanadoo.es
Tel.: +034 96 120 17 67
Movil: 651 35 35 11

Date: Tue, 16 Jul 2002 13:18:03 -0400
From: "Upton, Shawn" <SUpton@allegromicro.com>
To: qrp-l@lehigh.edu
Subject: [129876] Dipole loading
Message-ID: <E1F0152638DBD311AEF700D0B74455E287E748@exchange_nh.allegromicro.com>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"

Are there formulas out there for how to roughly determine loading coils? I'd like to make a short 40m dipole, to hide under the rafters, about 21 feet long, with the coils probably at the halfway points; but is this purely trial and error for selecting the loading coil inductance?

Shawn Upton, KB1CKT

Date: Tue, 16 Jul 2002 12:32:50 -0500
From: "George, W5YR" <w5yr@att.net>
To: SUpton@allegromicro.com
Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>
Subject: [129877] Re: Dipole loading
Message-ID: <3D3458C2.AE9B83E5@att.net>

MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Shawn, I once put up a shortened 40-meter rotary dipole that was very successful. Overall length was about 21-22 feet. It consisted of a center loading coil with the coax tapped onto a couple of turns in the center; two loading coils about halfwave between the center and the end and large capacity hats on each end formed from 4 spokes each two feet long simulating a four feet diameter disc.

Tuning was completely cut and try using the line SWR as the pruning guide. That was back in the early 70's so no antenna analyzers then!

I found the SWR bandwidth to be pretty narrow so I made one side a couple of inches longer than the other and that broadened out the response "enough" to cover the band.

I had great success with that antenna up about 50 ft and juiced with a KW from an SB-220 amp. I was frequently cited in qsos as the loudest 5 on the band. Once I was told that I was QRMing Radio Moscow so badly that they were not readable!

So, get to work! A shortened dipole like you propose will be a little more lossy and have a narrower SWR bandwidth, but a tuner will take care of that.

If you really want to get scientific, try modelling the antenna with EZNEC. If you don't have it, download the free demo from W7EL - see any QST for his ad - and get a start on probable dimensions, coils, etc. But keep in mind that putting it in the attic changes a lot of things so the model might not be that good. In the end you will have to do some pruning and cut and try - but that is where the fun comes in!

Let me know how this one comes out!

73/72/oo, George W5YR - the Yellow Rose of Texas
Fairview, TX 30 mi NE of Dallas in Collin county EM13qe
Amateur Radio W5YR, in the 56th year and it just keeps getting better!
QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735
Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

"Upton, Shawn" wrote:

>

> Are there formulas out there for how to roughly determine loading coils?
> I'd like to make a short 40m dipole, to hide under the rafters, about 21
> feet long, with the coils probably at the halfway points; but is this purely

> trial and error for selecting the loading coil inductance?

Date: Tue, 16 Jul 2002 13:33:37 -0400
From: David Hinerman <WD8CIV@worldnet.att.net>
To: qrp-l@lehigh.edu
Subject: [129878] Re: Dipole loading
Message-ID: <5.1.0.14.1.20020716131045.00a71ec0@ipostoffice.worldnet.att.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

At 01:18 PM 7/16/2002 -0400, you wrote:

>Are there formulas out there for how to roughly determine loading coils?
>I'd like to make a short 40m dipole, to hide under the rafters, about 21
>feet long, with the coils probably at the halfway points; but is this purely
>trial and error for selecting the loading coil inductance?

Shawn,

I built a loaded 75M dipole from a graph in the mid-70s edition of the ARRL Antenna Book. The section on loaded dipoles had a graph that related antenna length, load position, and load inductance (or maybe it was load reactance, that had to be converted to inductance for the given frequency.)

A couple minutes' work with a straightedge and pencil (a really sharp pencil) yielded an inductance value. It still required some cut-and-try to prune it to a decent match afterwards, but it was a good place to start.

Unfortunately I don't have that book any more.

I did a quick Web search for "loaded dipole calculator" and found this program:

<http://www.webbworks.com/crstroke/calcs/addaload.exe>

It's an MS-DOS program that asks for antenna length (in meters), load position (as a decimal fraction of the length), wire diameter in mm, and design frequency. It calculates the load (inductance or capacitance as needed) to resonate a vertical antenna with the conditions entered. In the text displayed at startup it says you can use the dimensions for each half of a dipole.

I tried your situation: length 3.15 meters (half of your 21 feet), load placement 0.5 (in the center of the leg), wire diameter 2 mm (a wild guess), and frequency 7.04 MHz. I get 43.38 uH.

Increasing the wire diameter to 3 mm reduces the inductance to 41.18 uH.

I hope this helps.

Dave

"You can fool some of the people all of the time. That's enough to make a living." - Lance Burton

Dave Hinerman
WD8CIV@worldnet.att.net

Date: Tue, 16 Jul 2002 14:13:55 -0700
From: "Dave Benson" <nn1g@earthlink.net>
To: <qrp-1@lehigh.edu>
Subject: [129879] KIT: the 'Rock-mite'
Message-ID: <000101c22d0d\$b2bc39e0\$ece9d73f@pavilion>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

gang-

Thanks for your patience! The 'Rock-mite' transceiver kit is now up on my website.

I have limited quantities of crystals on hand at the moment but I will be taking orders and shipping in the order they're received.

73- Dave

Dave Benson, K1SWL
dave@smallwonderlabs.com
<http://smallwonderlabs.com>
Phone/fax 860-537-8031

Date: Tue, 16 Jul 2002 14:27:53 -0400
From: "Joe W2KJ" <w2kj@earthlink.net>
To: "qrp-1" <qrp-1@lehigh.edu>

Subject: [129880] Charging a 150amp/hr battttery
Message-ID: <003c01c22cf6\$806561e0\$a234323f@cdcvh01>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Howdy Gang:

Picked up a couple of Gates Cyclon "Sealed Re-chargeable" 150 amp/hr batteries a while back.

The battery is comprised of six tubular batteries connected in series and fastened together like a "six-pack" of Coke.

Would like to try and charge these puppies up and am seeking advice on a safe way to do this.

I have a variable Astron 12VDC at 15amps power supply that could be used for charging. Is this supply capable of safely charging the 150amp/hr battery??

Would a series current limiting resistor be required?? If so, what value??

Any and all ideas/suggestions welcome before I start letting out smoke:-)

Plan to use these batteries for providing power to remote LDG antenna tuners for a new antenna set-up here. More on this later.

I know this is an overkill for the LDG but the batteries were free of charge:-)

Many thanks for any assistance possible.

72, Joe W2KJ
I QRP, therefore I am

Date: Tue, 16 Jul 2002 15:09:14 -0400
From: "w8diz" <w8diz@fpqrp.com>
To: <qrp-l@lehigh.edu>, <fpqrp-l@fpqrp.com>
Subject: [129881] HB: LM317 voltages

Message-ID: <004401c22cfc\$58539a90\$39d81b41@cinci.rr.com>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Hi Gang,

recently, I become the owner of several thousand LM317L voltage regulators. Wanting to use then instead of others like the LM78L05 and LM78L08 etc, I was constantly calculating, trying to find the correct resistor values to get my desired voltages. Well, I finally got smart and wrote a little program and captured the output. Here is a table using standard "R" values for the regulator.

Hope some of you can use it.

<http://home.cinci.rr.com/w8diz/LM317.htm>

72 & "oo's" - Dieter (DIZ) Gentzow - W8DIZ - Loveland, Ohio
Clermont County - EM79uf - near Cincinnati; 39.218N - 84.305W
SOC-8 DLQRPAG-1454 ARCI-10226 ARS-781 QRPL-1998 10X-9389 CATT-26
FP#-1 <http://home.cinci.rr.com/w8diz> & <http://kitsandparts.com>

Date: Mon, 17 Jun 2002 11:39:26 -0500
From: "dan wanchic" <wa8vzq@cloudnet.com>
To: <qrp-1@lehigh.edu>
Subject: [129882] Re: Dipole loading
Message-ID: <000201c2161d\$db9605a0\$eff1ddcc@wa8vzq>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Shawn,

I have loaded dipoles installed in the rafters of my garage for 40, 30, 20 & 15 meters.

I am typically not very active but I've worked a few stations on each band. They seem to work OK.....I hear them, they hear me ;-))

Mine are all 16 feet long and loading is installed 5 feet out from the center insulator.

The loading coils were designed using the formula found in the ARRL antenna handbook.

I wrote a program for my HP calculator that not only calculated the amount of inductance needed but also the number of turns on the loading coil. If you have an HP 48S or SX, I'd be happy to send you a copy. (the HP program gets me within a turn or two as a starting point)

All have the ends folded back underneath the main antenna. The length of the ends is trimmed for resonance. They kind of look like the diagram below. The outside [] are loading coils. Mine are built on either 2 or 2 1/2 inch pvc pipe. The 15 meter version does not have any loading coil, it just has the ends folded back for resonance. The 40 meter one is resonant at about 7050 +/- and I get about 100 KHz BW based on 2:1 SWR....

```
-----[ ]-----[ ]-----[ ]-----  
|___                               ___|
```

The tails are suspended below the main antenna by using spacers of 1/2 pvc pipe about 6 inches long. I drill a hole directly across the closed end of a 1/2 inch pvc end cap. The wire near the ends of the dipoles and of the tails runs through the end caps and friction between the cap and the spacer keeps the wire in place. I use about 2 - 3 spacers on each end.

This is how I tune them up

1. start with about 2 foot tails on the ends
2. looked for resonant frequency just below the bottom of the band using antenna analyzer
3. adjusted turns on the loading coils such that I adding one more turn would make resonance in the band
4. trimmed the ends from that point to resonance

BTW - rigs mostly SWL GM series....mostly at about 2 watts.....

Regards

Dan
St. Cloud, MN

-- -- -- -- -- WA8VZQ -- Since 1967 -- -- -- -- --
Federal Aviation Administration -- -- Electronics Technician
ex-Nuclear Emergency Search Team (NEST) 1977 - 1981
-- -- -- NEST Three Mile Island Response Team -- -- --
-- -- ex-HFer @ ACA-15, WAR-46, KAL-24, KZ5VZ -- -- -- --

Date: Tue, 16 Jul 2002 22:04:38 +0200
From: "Ingo Meyer, DK3RED" <dk3red@t-online.de>
To: QRP-L <qrp-l@lehigh.edu>
Subject: [129883] Re: Charging a 150amp/hr batttery
Message-ID: <3D347C56.4ADEB05B@t-online.de>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Hello Joe,

CONGRATS to your QRP battery. ;o))

> I have a variable Astron 12VDC at 15amps power supply that
> could be used for charging. Is this supply capable of safely
> charging the 150amp/hr battery??
>
> Would a series current limiting resistor be required?? If so,
> what value??

PLEASE use a fuse for 20 or 25 amp's in the wire to your battery (near the connection points) BEFORE the first test. A short-circuit will kill the battery and possible you and your house.

You can charge the most sealed batteries with 0.15 C. That means with a current of 0.15 x amp/hr or less. The maximal current for your battery is 0.15 x 150 amp = 22.5 amp's. The problem is your power supply.

First problem. Is the battery voltage low, so a high current will flow in the battery. If there are a current limiter (not a fuse) in your power supply, so it is OK. Is there no limiter, so your power supply will produce smoke (or the fuse inside the power supply will work).

Solution 1: Measure the voltage of your battery now. Is it i.e. 10 volts (the minimal voltage for a healthy battery) and your power supply output is 13.8 volts, you need the following resistor.

13.8 volts - 10 volts
----- = 0.2533 ohms
15 amp's

But your resistor MUST consume a lot of power.

(13.8 volts - 10 volts) x 15 amp's = 57 watts ! ;o((

Good luck by searching these resistor. ;o)

Or you use a resistor with i.e. 4.7 ohm and more than 3 watts. This will charge the battery with a maximal current of only 0.8 amp's and you need more time, but it will save your power supply.

Solution 2: If you have access to a power supply with a limiter, so try it with this one. Is the maximal current less than 15 amp's, so you need only more time (and not a new power supply after the crash HI).

The second problem is the right voltage on the power supply. Only 12 volts are definitive too low. 13.8 volts are right.

Solution: Please see inside you power supply and look around for a good point (i.e. variable resistor) to push up the voltage at the right value.

--

72/73 de Ingo, DK3RED Don't forget: the fun is the power!

dk3red@t-online.de <http://www.t-online.de/~dk3red>
DL-QRP-AG #824 <http://www.dl-qrp-ag.de>

Date: Tue, 16 Jul 2002 13:23:43 -0700
From: "Tracy Markham" <tracy@bytemark.com>
To: "QRP-L" <qrp-l@lehigh.edu>, <w2kj@earthlink.net>
Subject: [129884] RE: Charging a 150amp/hr battttery
Message-ID: <GNEOLGDJDOPEALHJMKLCCKEKLCGAA.tracy@bytemark.com>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

I've recharged batteries for years with astron 'VS' series supplies ... I usually charge a cell like that at 10% it's rating for 10 hrs ... if the supply has current limiting built in you simply set the supply (not connected to the battery ...) to 14.4v, and the current to 0.

When you hook up the battery then bring the current up to whatever you are comfortable with. Most Astron supplies are NOT rated for continuous duty at their model number rating - if I remember correctly the xx20 series can deliver only 14 amps or so continuous.

It will get hot!

When the current limiting stops and the supply is giving the full 14.4v, drop it to 13.8 for the duration of the charge. You will find that the battery has an 'idling' current of about 1% it's total rating, when you reach that you have a fully charged battery.

Let it be known that NiCAD batteries are best stored DISCHARGED. Numerous reasons. I've had NiCADs in the closet for five years and after a few charge / discharge cycles they behave just like they did originally. Stored charged for as long they never seem to recover.

My \$.04 (inflation, you know!)
Tracy N4LGH

I have a variable Astron 12VDC at 15amps power supply that could be used for charging. Is this supply capable of safely charging the 150amp/hr battery??

Date: Tue, 16 Jul 2002 13:33:29 -0700 (PDT)
From: Gary Slagel <gds slagel@yahoo.com>
To: QRP L <qrp-l@lehigh.edu>
Cc: SUpton@allegromicro.com
Subject: [129885] Re: Dipole loading
Message-ID: <20020716203329.53682.qmail@web11602.mail.yahoo.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii

> Are there formulas out there for how to roughly
> determine loading coils?

Shawn,

If REALLY rough figures will help, I figure the total length of the antenna plus the loading coil is going to be just a little shorter then the wire would be without the coil. For example: 1/4 wave on 40 meters is about 33'. If you've got an 11' leg, the total

length of the loading coil wire is going to be something less than 22'. This works ok IF you've got an antenna analyzer so its easy to tune it. Using the above theory, I wrap the loading coil using the 22' of wire. Put my analyzer to it to find out where its resonant and start trimming.

I don't have any figures handy for 40 meters but... for 20 meters I've got a 9' resonator with a loading coil close to the center. The above theory would predict I need about 7'6" of wire (1/4 wave on 20 is 16'6"). The wire I actually ended up using on the loading coil ended up being 6'6". In this case I was winding the coil on a 1" diameter form but, since we're talking ROUGH figures, (open mouth put in foot) I find that the diameter of the coil and/or the diameter of the wire don't make a huge difference in the length of the wire.

Hope this helps.
Gary

=====

Gary Slagel/N0SXX
Conifer, CO 80433
gdslagel@yahoo.com
Personal Website: <http://members.fortunecity.com/gdslagel>

Do You Yahoo!?
Yahoo! Autos - Get free new car price quotes
<http://autos.yahoo.com>

Date: Tue, 16 Jul 2002 16:43:03 -0400
From: David Hinerman <WD8CIV@worldnet.att.net>
To: qrp-l@lehigh.edu
Subject: [129886] Re: Charging a 150amp/hr batttery
Message-ID: <5.1.0.14.1.20020716161447.00a71520@ipostoffice.worldnet.att.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

At 02:27 PM 7/16/2002 -0400, you wrote:
>Would like to try and charge these puppies up and am seeking
>advice on a safe way to do this.

>

>I have a variable Astron 12VDC at 15amps power supply that
>could be used for charging. Is this supply capable of safely
>charging the 150amp/hr battery??

Joe,

I'll leave the details of proper charging to other, wiser heads. But a handy trick when connecting an unknown load (a potentially shorted battery, for example) to a power source is to put a light bulb in series with it. Use a bulb that the power source can comfortably supply - in your case, a 100-watt 12 volt bulb. Don't have one? Auto headlamps, from what I can find in a quick Web search, seem to run between 50 and 100 watts.

With a light bulb in series, even if the device under test (DUT) is a dead short, the bulb will limit the current to whatever the bulb's rating indicates - about 8.3 amps for a 100 watt, 12 volt bulb. If the resistance of the DUT increases (like a charging battery), it starts to limit the current by itself, reducing the amount of power used by the bulb. The bulb gets dimmer, and its resistance decreases. A cold bulb filament has very low resistance. As the bulb heats the resistance rises until it reaches equilibrium - enough resistance to allow enough current to generate enough heat to cause enough resistance... you get the idea.

Anyway, one "gotcha" I had encountered using this trick in a radio shop was that initial rush of current when I switched on a 12V supply connected to a light bulb. While the bulb's ratings were easily within the supply's capabilities, that short burst of current into the cold filament caused the overcurrent trip on the supply's regulator to shut it down. I had to turn the variable supply down to 0 volts, turn on the output, then turn up the voltage to get the bulb to light. You may need to do the same.

This is all just to protect yourself and your gear in case the battery tries to gobble too much current at one time. It's not a "real" charging circuit. But in a pinch it'll let you get some charge into the battery safely.

Dave

"You can fool some of the people all of the time. That's enough to make a living." - Lance Burton

Dave Hinerman
WD8CIV@worldnet.att.net

Date: Tue, 16 Jul 2002 20:46:54 +0100
From: Chuck Adams <k7qo@earthlink.net>
To: w2kj@earthlink.net,
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [129887] Re: Charging a 150amp/hr battttery
Message-ID: <5.1.0.14.0.20020716203757.009e95e0@mail.earthlink.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

I have set of these batteries also and they give new meaning to the term "boat anchor". :-)

I use a regular gel-cell charger that is only capable of doing about 100mA or so, but by leaving the battery on charge the whole time I don't have to worry about it not being charged.

The battery is not in use at this time, but is on the charger, as I am using the smaller 4AHr batteries to run the SWL-30+ and the LDG tuner. Although not is use much lately due to other projects.

For those of you interested in AZ weather. It has been raining/sprinkling on and off for about 7 days now, but no serious accumulations yet. We are currently having thunderboomers at the present time (20:40UTC July 16th). Nice to have temp outside hovering around 72 degrees on the Fahrenheit scale.

Bill, K5BDZ, had a circuit for a gel-cell charger that you might be interested in building also to charge the Gates cells. I bought my cells at HamComm many years ago (more than 10) and they measure 13.45V on the charger right now. They should last a long long time if you don't abuse them. I don't recommend using an Astron supply or anything other than a gel-cell charger on them.

I used a section of a broom handle and two metal straps to make a carrying handle using the two top screws in the case. A picture if you need one I can do on the web page.

FYI,

Chuck Adams, K7QO CP-60 k7qo@earthlink.net
<http://www.qsl.net/k7qo>

Moving to Arizona? --- Bring your own water, please.

Date: Tue, 16 Jul 2002 16:48:00 -0400
From: "Steve Lawrence" <Steve.Lawrence@itwfeg.com>
To: qrp-l@lehigh.edu
Subject: [129888] Re: Dipole Loading
Message-ID: <0FD6FB41FC.0E8BE276-0N85256BF8.0071B5EE-85256BF8.00723C0E@itwfeg.com>
MIME-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

July 2002 issue of QST had an article on a unique loading scheme for a 40m dipole. The "linearly loaded dipole" was shortened by a section of 450 ohm ladder line, strung in parallel with the dipole (actually threaded on the main dipole wire). The technique could be applied to other bands and/or vertical antennas.

An intriguing alternate to coils.

Steve
aa8af

Date: Tue, 16 Jul 2002 16:52:26 -0400
From: "Hare,Ed, W1RFI" <w1rfi@arrl.org>
To: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>
Subject: [129889] RE: Modulation modes
Message-ID: <125490A005E3D3118C9C00805FC743CC040F44B0@kahless.arrlhq.org>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"

Also, consider the peak-to-average ratio of SSB vs FM.

73,
Ed Hare, W1RFI
ARRL Lab
225 Main St
Newington, CT 06111
Tel: 860-594-0318
Internet: w1rfi@arrl.org

Web: <http://www.arrl.org/tis>

> -----Original Message-----

> From: George, W5YR [mailto:w5yr@att.net]

> Sent: Monday, July 15, 2002 7:59 AM

> To: Low Power Amateur Radio Discussion

> Subject: Re: Modulation modes

>

>

> Karl, could you give a reference where this experiment is described?

>

> The likely explanation is that the capture effect of FM

> exceeded the S/N

> improvement capability of SSB under the conditions of the experiment.

>

> 73/72/oo, George W5YR - the Yellow Rose of Texas

> Fairview, TX 30 mi NE of Dallas in Collin county EM13qe

> Amateur Radio W5YR, in the 56th year and it just keeps getting better!

> QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735

> Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

>

>

> "Karl F. Larsen" wrote:

> >

> > I was sure that Frequency Modulation while nice

> > and quiet with

> > a big signal would fall flat on it's face against SSB.

> >

> > So a test with several listeners was conducted and

> > they had no

> > idea what was going on. But the voice coming out of the radio asked

> > questions, like "what day is this?". At first it was too

> > much noise and

> > they could not hear the questions. But as it got louder they could.

> >

> > What happened was the listeners were able to copy

> > the FM at a

> > LOWER power than SSB.

> >

> > This was done with a HP instrument as transmitter and the

> > receiver was a Kenwood 940 transceiver and the test was

> > conducted at the

> > U of Texas, Austin.

> >

> > The FM was narrow band and the SSB was normal and

> > the frequency

> > was in the 10 meter Ham band.
>

Date: Tue, 16 Jul 2002 15:55:27 -0500
From: "Coleman Callaway" <coleman@callaways.org>
To: <qrp-1@lehigh.edu>
Subject: [129890] MFJ493 Keyer Mods
Message-ID: <NABBJCMIFK00PDHFGPPFMEDIFBAA.coleman@callaways.org>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

If you are using an MFJ493 Memory Keyer with its serial port, read on....

I have reworked the MFJ493 control software to fix some occasional hangs caused by serial port input and to implete some commands to make the keyer easier to use. The mods helped me a lot in using the keyer with my logging software. The modified software implements the following changes:

- fixes the hangs
 - touching the paddles stops sending CW that came in from the serial port
 - commands can be sent via serial port while the keyer is sending CW.
- Allows the logging software to change keyer
 speed while the keyer is sending
- added a command for each keyer parameter to make it easier to talk to the keyer through the serial port

You can find a complete list of the new commands at www.callaways.org/n4im

The mod requires you to change the 27256 EPROM on the keyer PC board. If you have access to an EPROM burner for a 27256, you can download the new software image at the above site. If you don't have access to a burner and want to try this mod, please email me directly and I can make you one.

Coleman Callaway, N4IM
Georgetown, TX
n4im@callaways.org

Date: Tue, 16 Jul 2002 17:01:04 -0400
From: David Hinerman <WD8CIV@worldnet.att.net>
To: qrp-1@lehigh.edu

Subject: [129891] stacked toroids
Message-ID: <5.1.0.14.1.20020716165720.00a42480@ipostoffice.worldnet.att.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

Folks,

What effect does stacking powdered-iron toroids have on the inductance per turn?

For example, the table on <http://www.bytemark.com/products/iptcres.htm> shows that the T50-2 core has 49 uH for 100 turns. If I stack two cores together and wind 100 turns on them, will I get something predictably different? (Like maybe 98 uH?)

Dave

"You can fool some of the people all of the time. That's enough to make a living." - Lance Burton

Dave Hinerman
WD8CIV@worldnet.att.net

Date: Tue, 16 Jul 2002 21:02:38 +0100
From: Chuck Adams <k7qo@earthlink.net>
To: qrp-l@lehigh.edu
Subject: [129892] Rock-Mite Mod #1
Message-ID: <5.1.0.14.0.20020716210044.009f5030@mail.earthlink.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

Dave et.al.,

How about a version without crystals for those of us that might be interested in using the color-burst frequency on 80 meters.

I have an 80 meter vee-beam that I haven't spent much time on 80 meters with, but might be interested in some hard work this winter. I know that QRP on 80 meters seems to be very difficult from my experiences in the past.

FYI,

Chuck Adams, K7QO CP-60 k7qo@earthlink.net
<http://www.qsl.net/k7qo>

Moving to Arizona? --- Bring your own water, please.

Date: Tue, 16 Jul 2002 14:13:31 -0700
From: "Tracy Markham" <tracy@bytemark.com>
To: "QRP-L" <qrp-l@lehigh.edu>
Subject: [129893] RE: stacked toroids
Message-ID: <GNEOLGDJDOPEALHJMKLCMEKPCGAA.tracy@bytemark.com>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="Windows-1252"
Content-Transfer-Encoding: 7bit

As a general rule of thumb, simply add the A(sub)L values and calculate as normal.

You are on target!
Tracy N4LGH

-----Original Message-----
From: owner-qrp-l@Lehigh.EDU [mailto:owner-qrp-l@Lehigh.EDU] On Behalf Of David Hinerman
Sent: Tuesday, July 16, 2002 2:01 PM
To: Low Power Amateur Radio Discussion
Subject: stacked toroids

Folks,

What effect does stacking powdered-iron toroids have on the inductance per turn?

For example, the table on <http://www.bytemark.com/products/iptcres.htm> shows that the T50-2 core has 49 uH for 100 turns. If I stack two cores together and wind 100 turns on them, will I get something predictably different? (Like maybe 98 uH?)

Dave

"You can fool some of the people all of the time. That's enough to make a living." - Lance Burton

Dave Hinerman
WD8CIV@worldnet.att.net

Date: Wed, 17 Jul 2002 05:19:35 -0400
From: "ss lyon" <sslyon@megalink.net>
To: "chat qrp" <qrp-l@lehigh.edu>
Subject: [129894] Short Dipole w/Dave Benson's Noise Generator
Message-ID: <016501c22d73\$1170f6a0\$aac7e742@megalink.net>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Remember the neat little trick recently cooked up by Dave Benson. If you don't have an antenna analyzer at the moment, the NN1G Noise Generator is a natural and uses your own receiver (even a minimalist one) to trim an antenna to your frequency of choice. They go together easily in less than an hour, need no fancy box and are really effective. Lots of 'em are out there right now -any cool application comments from users?

I'm handling the kitting for NEQRP CLUB and they're available for \$17 postage paid in US/Canada, Check, M.O. or PayPal is ok.

72/73
AA1MY

Seabury Lyon
99 Sparrowhawk Mtn Rd
Bethel ME, 04217 U.S.A.
207-836-2576

Virus Protection by Norton and ZoneAlarm

Date: Tue, 16 Jul 2002 17:23:56 -0400
From: "w8diz" <w8diz@fpqrp.com>
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [129895] Re: Rock-Mite Mod #1
Message-ID: <007a01c22d0f\$1832ffb0\$39d81b41@cinci.rr.com>

MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Hi Chuck,

Here is some data on a 80 meter 25 MW Beacon that I ran back in Feb of 2000. I may run it again this Summer and compare results from Summer vs. Winter.

<http://home.cinci.rr.com/w8diz/beacon.htm>

Not sure if it can be heard in 7 land though :-)

72 & "oo's" - Dieter (DIZ) Gentzow - W8DIZ - Loveland, Ohio
Clermont County - EM79uf - near Cincinnati; 39.218N - 84.305W
SOC-8 DLQRPAG-1454 ARCI-10226 ARS-781 QRPL-1998 10X-9389 CATT-26
FP#-1 <http://home.cinci.rr.com/w8diz> & <http://kitsandparts.com>

----- Original Message -----

From: "Chuck Adams" <k7qo@earthlink.net>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Sent: Tuesday, July 16, 2002 4:02 PM
Subject: Rock-Mite Mod #1

Dave et.al.,

How about a version without crystals for those of us that might be interested in using the color-burst frequency on 80 meters.

I have an 80 meter vee-beam that I haven't spent much time on 80 meters with, but might be interested in some hard work this winter. I know that QRP on 80 meters seems to be very difficult from my experiences in the past.

FYI,

Chuck Adams, K7QO CP-60 k7qo@earthlink.net
<http://www.qsl.net/k7qo>

Date: Tue, 16 Jul 2002 14:21:21 -0700
From: "Bill Jones" <kd7s@psnw.com>
To: <k7qo@earthlink.net>,
"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [129896] Re: Rock-Mite Mod #1
Message-ID: <000d01c22d0e\$bc0c9b10\$9110010a@fresno>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

Interesting that Chuck and I are interested in an 80 meter version. I am thinking of a way to stay in touch when I'm backpacking in the Sierra. I often camp at the bottom of a canyon with 10,000-12,000 ft mountains in any direction. A low dipole (NVIS) would be ideal for 200-300 mile contacts, especially during daytime or early evening hours.

=====
Bill Jones - <><
Sanger, California
=====

----- Original Message -----
From: "Chuck Adams" <k7qo@earthlink.net>
To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>
Sent: Tuesday, July 16, 2002 13:02 PM
Subject: Rock-Mite Mod #1

>
> Dave et.al.,
>
> How about a version without crystals for those of us
> that might be interested in using the color-burst frequency
> on 80 meters.

Date: Tue, 16 Jul 2002 16:45:48 -0500
From: Chuck Carpenter <w5usj@9plus.net>
To: WD8CIV@worldnet.att.net, qrp-l@lehigh.edu
Subject: [129897] Re: stacked toroids
Message-ID: <3.0.2.32.20020716164548.006aa66c@mail.9plus.net>
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Dave,

Doing some measurement with a pair of T50-6 torroids, I got the following:

1 core and 10 turns measured 0.6uH

2 cores and 10 turns measured 0.9uH

It's not linear, of course, but the relationship should be the same. The inductance with T50-2 cores would be slightly more with the same number of turns. About 0.65uH with 10 turns. (I only had one red core handy...)

Values measured with an AADE L/C Meter IIB

Email Alt: w5usj@arrl.net, w5usj@go.com

Chuck Carpenter, W5USJ, Point, Rains Co., TX - EM22cv, NETXQRP #1
QRP-ARCI #5422, QRP-L #1306, QRPp-I #115, ARS #1280, SOC #57
Zombie #759, COG #11, 6 Club #201, NETXQRP <http://www.netxqrp.org>

Date: Tue, 16 Jul 2002 17:47:54 -0400
From: "Paul Christensen" <w9ac@arrl.net>
To: "Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>
Subject: [129898] FS: DSW-20
Message-ID: <00d301c22d12\$71066160\$6401a8c0@attbi.com>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

I'm getting ready for the debut of the new DSW-II!

DSW-20 in perfect operating and cosmetic condition. Stock DSW-20...no mods done.
Includes gorgeous blue anodized case and owner's
manual. \$110 + \$5.00 shipping. Please reply via private e-mail.

-Paul

Date: Tue, 16 Jul 2002 15:59:40 -0600 (MDT)
From: "Karl F. Larsen" <k5di@zianet.com>
To: ss lyon <sslyon@megalink.net>
Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>
Subject: [129899] Re: Short Dipole w/Dave Benson's Noise Generator
Message-ID: <Pine.LNX.4.44.0207161554550.3248-1000000@Daisy.dog>

MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Hi Seabury, I hope you made a grammerical error and called it " the NN1G Noise Generator". To work like your indicating it must be the NN1G Noise Bridge and include both a potenimeter and a variable capacitor.

Where can I learn more about this kit?

On Wed, 17 Jul 2002, ss lyon wrote:

> Remember the neat little trick recently cooked up by Dave Benson. If you don't
> have an antenna analyzer at the moment, the NN1G Noise Generator is a natural
> and uses your own receiver (even a minimalist one) to trim an antenna to your
> frequency of choice. They go together easily in less than an hour, need no fancy
> box and are really effective. Lots of 'em are out there right now -any cool
> application comments from users?
>
> I'm handling the kitting for NEQRP CLUB and they're available for \$17 postage
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> 72/73
> AA1MY
>
> Seabury Lyon
> 99 Sparrowhawk Mtn Rd
> Bethel ME, 04217 U.S.A.
> 207-836-2576
>
> Virus Protection by Norton and ZoneAlarm
>
>

--
Yours Truly,

- Karl F. Larsen, (505) 524-3303 -

Date: Tue, 16 Jul 2002 21:52:42 +0000
From: "Brad Hernlem" <alihernlem@hotmail.com>
To: qrp-l@lehigh.edu
Subject: [129900] 2N5564 good at RF?
Message-ID: <F49b4fbS3JH47R6740w00016bcd@hotmail.com>

Mime-Version: 1.0

Content-Type: text/plain; format=flowed

Do these dual matched N-channel JFETs have any RF application? I've got a few hundred of them. Am wondering whether they would do well for FET probe use or other RF application. Anyone familiar with these?

Regards,

Brad

Chat with friends online, try MSN Messenger: <http://messenger.msn.com>

Date: Tue, 16 Jul 2002 17:16:40 -0500

From: "George, W5YR" <w5yr@att.net>

To: k5di@zianet.com

Cc: Low Power Amateur Radio Discussion <qrp-l@lehigh.edu>

Subject: [129901] Re: Short Dipole w/Dave Benson's Noise Generator

Message-ID: <3D349B48.D43B7480@att.net>

MIME-Version: 1.0

Content-Type: text/plain; charset=us-ascii

Content-Transfer-Encoding: 7bit

A noise generator could work as Seab describes . . .

73/72/oo, George W5YR - the Yellow Rose of Texas

Fairview, TX 30 mi NE of Dallas in Collin county EM13qe

Amateur Radio W5YR, in the 56th year and it just keeps getting better!

QRP-L 1373 NETXQRP 6 SOC 262 COG 8 FPQRP 404 TEN-X 11771 I-LINK 11735

Icom IC-756PRO #02121 Kachina 505 DSP #91900556 Icom IC-765 #02437

"Karl F. Larsen" wrote:

>

> Hi Seabury, I hope you made a grammerical error and called it " the NN1G
> Noise Generator". To work like your indicating it must be the NN1G Noise
> Bridge and include both a poteniometer and a variable capacitor.

>

> Where can I learn more about this kit?

>

> On Wed, 17 Jul 2002, ss lyon wrote:

>

> > Remember the neat little trick recently cooked up by Dave Benson. If you don't
> > have an antenna analyzer at the moment, the NN1G Noise Generator is a natural
> > and uses your own receiver (even a minimalist one) to trim an antenna to your
> > frequency of choice. They go together easily in less than an hour, need no
fancy

> > box and are really effective. Lots of 'em are out there right now -any cool

> > application comments from users?

Date: Tue, 16 Jul 2002 18:19:08 -0400

From: Bill Coleman <aa4lr@arrl.net>

To: <jamesd1@flash.net>,

"Low Power Amateur Radio Discussion" <qrp-l@lehigh.edu>

Subject: [129902] Re: Radial Lengths (long, was dipping traps)

Message-ID: <20020716222040.PTUC11981.imf03bis.bellsouth.net@[192.168.0.20]>

Mime-Version: 1.0

Content-Type: text/plain; charset="US-ASCII"

On 7/15/02 10:42 PM, James R. Duffey at jamesd1@flash.net wrote:

>Bill - I want to thank you for taking the time to reply to my posting,

>

>Let me explain my "sort of nonsense", as you put it, recommendations for
>radials.

Well, maybe it came out a bit more strongly than I intended.

>The numbers I calculated were for a radial end separation of 0.02

>wavelengths. If you put 0.02 into your sample calculations for 0.25

>wavelength radials, you will get my numbers. And my recommendation for 0.25

>wavelength radials, 78 is only slightly larger than the 64 you propose for a

>spacing of 0.25 wavelengths.

More radials might be beneficial when the ground conductivity is very poor, but the main issue I had was the notion of having shorter or longer radials than 0.25 wavelength.

>For years, I read posts by Tom, W8JI, on the Top Band Reflector about this

>limit and his recommended radial separation of 0.01 to 0.05 wavelengths.

Yes, Tom is now recommending between 0.025 and 0.050 wavelength.

>While this made sense to me, I had never seen anybody discuss it in detail

>or derive it from what is known of induced ground currents. In the July

>2000 QST Severn wrote an excellent article on ground currents under

>verticals which summarized the pioneering work of Brown at RCA in the mid
>30s. The article is highly recommended reading. Spreadsheets are available
>with the equations from this article on the ARRL web site.

>

>I modified one of the equations to calculate the amount of relative current
>collected with a given radial spacing at the circumference. There is an
>error in the equations given by Severn, a correction was printed later. The
>spreadsheet equations are correct on the League's web site. I calculated

>

>
$$Relcurrent = 1 / \sqrt{1 + ((36000 * \sigma * (\pi^4) * (\delta)^2 / f) * (\log(30000 * (\delta/2) / f * (0.1)) - 0.5)^2)}$$

>

>where sigma is the soil conductivity, delta is the separation of the radials
>at the ends and f is the frequency of operation. I used MathPad to do these
>calculations. I will be happy to provide you with a copy of the simple
>program.

>

>Here are the results of that calculation. The delta column is the radial
>spacing. The remaining three columns are the relative current for the ground
>conductivity at the head of the column. The units are Siemens/meter, a unit
>of conductivity. The 0.001 S/m is poor soil, the 0.005 S/m is average soil,
>and the 0.04 S/m is for excellent conductivity. Severn used these numbers in
>his article and I wanted to be able to compare results. Selected points did
>agree with those Severn calculated, so I am fairly confident that these are
>pretty good. These numbers were calculated for 1.8 MHz.

I'll point out that the "nonsense" <grin> chart you supplied was for 14
MHz, not 1.8, and the ground currents would be very different, unless you
went back to the equation above.

>delta	0.001 S/m	0.005 S/m	0.04 S/m
--------	-----------	-----------	----------

>

>0.001	0.99	0.99	0.99
>0.002	0.99	0.99	0.99
>0.005	0.99	0.99	0.99
>0.01	0.99	0.99	0.90
>0.02	0.99	0.97	0.42
>0.05	0.93	0.46	0.065
>0.1	0.51	0.12	0.015
>0.2	0.13	0.03	0.003
>0.5	0.02	0.004	0.0004

>

>One can cut and paste this into a spreadsheet to plot it. The graphs are
>quite convincing.

>

>Now one can decide what value of delta to use depending on the soil
>conductivity. If we set an arbitrary amount of collected current of say 90%,
>then we see that the delta is slightly higher than 0.05 for poor soil, about

>0.03 or so for average soil, and about 0.01 for good soil. I was encouraged
>that this was the same range that Tom had suggested. Note that these are
>fairly sharp functions, going from 99% to a few percent over a spacing of a
>factor of 20 or so.

Interesting this is the opposite of what I understood. This implies that
you need FEWER radials over poor soil than over good. That doesn't seem
reasonable.

Over really excellent conductive soil (like in a salt marsh), a handful
of radials is proven to be extremely effective. (Or is this due to the
nearness of salt-water in the far field?)

And elevated radials are another matter, but as we move away from ground
(by 0.5 wave or so), a few radials are again effective.

So, I see something of a conundrum in these numbers.

>I chose a delta value of 0.02 to be conservative. Most of the current
>induced in the ground is close to the antenna, and I felt that it is best
>err on the side that one gets as much of this as one can, even if one spends
>a bit more on wire cost. Also, since most hams do not know their ground
>conductivity and it can vary over seasons; again at the risk of leaving some
>uncollected current I have estimated conservatively. In addition, many of
>the verticals used by hams are short (less than a quarter wave), and the
>importance of ground is more significant for these as the radiation
>resistance is lower and ground losses are a bigger fraction of the total
>losses. Thus, it is important to insure that one collects as much of the
>current close in to the vertical as possible.

And herein lies my objection -- I don't see where multiple short radials
would be that effective. You indicated using 66 feet of wire to produce
17 radials of about 3.5 feet.

By my calculations, four radials are within a fraction of a wavelength out
to about this distance (depending on which wavelength fraction you use).
I don't see the benefit of cutting up the longer wire to fill in the
center.

To me, it seems more pragmatic to place as many 0.25 wave radials as one
can, within the wire budget. That way, when more wire becomes available,
additional radials can be laid between, rather than having to splice in
longer ones (or change the number or position of them)

I think I see what you are driving at, though. Instead of taking the
resistive losses in the spaces between the radials, you're foreshortening
the radials, and taking all the resistive losses in the outer
circumference of the radial field.

>The amount to be gained in going to radials longer than a quarter wave
>length is quantifiable. Any Antenna Handbook published in the last 20 years
>has a table of "Optimum" radial configurations. In checking this, one finds
>that in going from 90 0.25 wavelength radials to 120 0.4 wavelength radials
>one gains a half dB. So there is about 0.5 dB out there to get by going past
>a quarter wavelength.

1/2 a dB using 2.5 times more real estate, and 2.13 times more wire.

One could get more gain by putting up a second vertical, with 90 0.25
radials in either a phased or parasitic arrangement. This would merely
double the required radial wire, and only require 50% more real estate --
and give a lot more gain!

>By the way I now realize that one can calculate the relative merit of the
>short radials by doing a numerical integration of the current density over
>the length of the radials. I will do this when I get some time.

You also have to include the current in the outer lengths of the radial
circle as well. If you compare the currents in a 0.25 wavelength radial
field to those with 0.1 wave radials, you have to account for the 0.15
wavelength "donut" where there are no radials at all, just barely
conductive ground.

>I will let you
>know when I have done the full calculation if you are interested.

Please do! A chance to learn something is always welcome.

>While my suggestions may seem "impossibly short" to you, consider the
>lengths on 160 Meters (or even 80 Meters) and the size of the average back
>yard. Or even the length of radials supported by a townhouse "backyard" that
>is 10 feet square.

When practical situations insist, of course you have to deal with
limitations. One of my 80m shunt radials is only 41 feet long -- because
that's the edge of my property.

I'd agree that the outer portion of the radials carry less current. W8JI
has even talked of the fact that 0.25 radials can be shortened to 0.22 or
0.20 wavelength with very little deleterious effect. But I think there's
a big gap between 0.20 wavelength and radials shorter than 0.1
wavelength, as your table suggested 3.5 foot radials for 20m.

>One needs more radials when the soil is good, not fewer. This is counter
>intuitive, but is discussed by Severn. W8JI has also made this point. One
>can think of it this way, with a good ground higher currents are induced in

>the ground than in the poorer ground. One needs more radials to collect
>these higher currents.

Does the poorer ground act as if it is "further away", such as the case
for elevated radials?

>I apologize for the long post, but I felt compelled to give some sense, by
>way of technical detail, to what you have labeled "nonsense". - Dr.
>Megacycle Kk6MC/5

Thanks, it makes much more sense now. Thanks for taking the time to write
it out.

Bill Coleman, AA4LR, PP-ASEL Mail: aa4lr@arrl.net
Quote: "Not within a thousand years will man ever fly!"
 -- Wilbur Wright, 1901

Date: Tue, 16 Jul 2002 18:20:32 -0400
From: "Hudson, Steve (RBI-US CMD)" <sdhudson@reedbusiness.com>
To: qrp-l@lehigh.edu
Subject: [129903] LED orange film free for postage
Message-ID: <A7E30DBD5928D442A7AE9EF215EEE133017D30E7@BINCMDGNOREXC02>
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"

Hi folks -- while continuing to clean out, I found a good bit of orange
graphic arts film ("Amberlith," if like me you're from that era...) that I
have sometimes used as a "window" over red, orange or yellow LEDs. If you'd
like some, I'm glad to send you several sheets for postage. It's cut into
sheets measuring about 8x10 (approximate).

I also found a box of 9x12 envelopes, so you don't have to worry about
sending an SASE, just postage. I figure a dollar or two should cover postage
on a long-time supply. If you'd like some, let me know -- but please drop me
an email first, though, to make sure it's not all gone.

Thanks!

Steve AA4BW

Date: Tue, 16 Jul 2002 15:28:25 -0700
From: Conrad Weiss <radman@best.com>
To: Low Power Amateur Radio Discussion <qrp-1@lehigh.edu>,
 ''Joe W2KJ'' <w2kj@earthlink.net>
Subject: [129904] RE: Charging a 150amp/hr battttery
Message-ID: <01C22CDD.6E542CC0@209-162-48-7.thegrid.net>

Joe & the gang,

The Cyclon's are utterly amazing batteries; and thus deserving of a "read-up" prior to power-up -- if you're interested in harvesting the 15 years of float life they're capable of yielding. The "six-packs" seem to defy gravity, in that they seem to weigh more than lead, yet they're loved by NASA for use in "pure" vacuum and weightless environments - go figure ;)! But onward...

A few salient points, then a URL and a closer:

- 1.) You **must** maintain the charge voltage per cell at 2.45-2.50vdc regardless of the in-rush charge current. Watch your min charge voltage = 14.7v min.
- 2.) While your Cyclon can tolerate a massive inrush of charge current (ie; 40 amps of CC charge, in your case) I wouldn't start out that way on the first charge. Reason being that the Cyclon will ***heat*** if charged too rapidly, which is OK, but it decreases the max number of charge/discharge cycles of battery life.
- 3.) For maintenance charging, the Astron PS (as good as it is) wouldn't be my choice. I'd opt for a small, intelligent charger with a Unitrode chip; isolate the Cyclons and live happily ever after ;)

The 60 page Cyclon Application Manual is can be down-loaded at the EnerSys Inc web page.... (you could think of it as the Gates > Hawker > EnerSys site)

URL: <http://www.hawker.invensys.com/product/content/pdf/product30.pdf>

Happy reading,

Conrad Weiss
NN6CW yow!... 250 Amps of Cyclon to run a Z-11:)? ... that's reserve :)!
(not related to Gates, Hawker & EnerSys...)

From: Joe W2KJ[SMTP:w2kj@earthlink.net]
Sent: Tuesday, July 16, 2002 11:28 AM
To: Low Power Amateur Radio Discussion

Subject: Charging a 150amp/hr batttery

Howdy Gang:

Picked up a couple of Gates Cyclon "Sealed Re-chargeable" 150 amp/hr batteries a while back.

The battery is comprised of six tubular batteries connected in series and fastened together like a "six-pack" of Coke.

Would like to try and charge these puppies up and am seeking advice on a safe way to do this.

I have a variable Astron 12VDC at 15amps power supply that could be used for charging. Is this supply capable of safely charging the 150amp/hr battery??

Would a series current limiting resistor be required?? If so, what value??

Any and all ideas/suggestions welcome before I start letting out smoke:-)

Plan to use these batteries for providing power to remote LDG antenna tuners for a new antenna set-up here. More on this later.

I know this is an overkill for the LDG but the batteries were free of charge:-)

Many thanks for any assistance possible.

72, Joe W2KJ
I QRP, therefore I am

Date: Wed, 17 Jul 2002 06:17:24 -0400
From: "ss lyon" <sslyon@megalink.net>
To: "chat qrp" <qrp-1@lehigh.edu>
Subject: [129905] Noise Bridge... oooops!
Message-ID: <000001c22d7c\$c86d5c00\$aac7e742@megalink.net>
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

I said NN1G Noise Generator (all those 'n's & 'g's) and meant to say NOISE
BRIDGE. Sorry for the confusion.

-but I am the supplier -if I don't keep making these goofs!

72

AA1MY

Seabury & Sharon Lyon

99 Sparrowhawk Mtn Rd

Bethel ME, 04217 U.S.A.

207-836-2576

Virus Protection by Norton and ZoneAlarm

End of QRP-L Digest 2618
